# John Anthony's Flora of Sutherland



dum rosea. Roservot.

mula scotica.

\*ic-ja aizoides. Mountain saxigrage.

rna. Spring squill.

Laxford.

aa

FIS\107 ANTHONY, J. John Anthony's flora BPSN2 aa (BPSH2)

ROYAL BOTANIC GARDEN EDINBURGH







John Anthony's Flora of Sutherland

John Anthony's Flora of Sutherland





(by permission of University of St Andrews)

John Anthony (foreground) together with left to right Professor R. J. D. Graham, Professor Sir William Wright-Smith, Mr J. L. Smith and Sir George Taylor

# John Anthony's Flora of Sutherland

EDITED AND COMPILED BY J. B. KENWORTHY

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FIS\107 ANTHONY, J. John Anthony's flora BPSN2 aa

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### **Editorial Note**

John Anthony died in June 1972 at the age of 78 just at a time when his Flora of Sutherland was almost completed. His interest in the Scottish Flora was a long one stemming from student days in Edinburgh, where he read both arts and science. He completed his B.Sc. in 1926 and that same vear he became a Fellow of the Botanical Society of Edinburgh. After some time in Malaya in the late 1920s he returned to Scotland as an assistant lecturer in Botany, first in Dundee then later as lecturer in Forest Botany in the University of Edinburgh. Retirement in 1958 was for John Anthony the stimulus to complete, what was for him both a challenge and a labour of love, the first county flora for Sutherland. He spent nearly twenty years of his life on this project, assisted for much of this time by his wife. I personally recall him as a quiet, modest yet friendly individual, whom I met from time to time in Bettyhill, the centre of his interests in Sutherland. A retired Army Captain from the First World War, holder of the Military Cross, a teacher, a scholar, an expert on wood anatomy, a man widely travelled in both the Far and Middle East and now the author of a county flora, such a combination of attributes is rare especially in our modern specialised way of life.

In compiling John Anthony's Flora, I have edited and added to sections he produced for the original manuscript. The sections concerned with Botanical Districts and Botanical Exploration are close to John Anthony's original, whereas the bibliography has been extended a good deal. Both the Index of Botanical Names and the Index of Latin Names have been added to the original script. I am particularly grateful to Mr Donald Paterson of the Botany Department of Aberdeen University for his help in this matter. I am responsible for the sections: The County of Sutherland, Climate, Geology, Soils, Vegetation and the Influence of Man, Dr Roy Watling kindly provided a short note on the Fungal Flora of Sutherland. Photographs are acknowledged individually. Throughout I have tried to blend my style with that of John Anthony. The main part of the flora has been edited and checked as far as possible and a list of authorities is to be found at end of the flora. In most cases the records are somewhat detailed being specific to the parish. While I have checked almost all the records with the Atlas of the British Flora, or with my personal experience of the north coast of Sutherland, I think there are very few doubtful records. In fact, I suspect that some of the older records may be confirmed and extended in the light of more extensive surveys especially in the west of the county. Thus any additional information or correction to the contents of the flora would be most appreciated.

I am indebted to Professor C. H. Gimingham for his comments upon the script and to Mr R. Mackecknie and Mr J. Grant Roger for similar services. I hope that the members of the Botanical Society of Edinburgh who have sponsored this flora will feel that they have made a positive contribution to Botany in Scotland with its publication.

Colour plates for a Flora are very expensive and I am grateful for the opportunity to use Shirley Poole's paintings. Permission to print the cover was given by Miss Shirley Poole of Middlesborough and by Misses Jean, Christine and Elsie McKay of Tigh-na-craig Bettyhill. The painting is one of many by Miss Poole to be found in several houses in Sutherland.

It took John Anthony a considerable time to compile his manuscript and it has taken me a number of years to produce the completed flora. During this time the Botanical Society of Edinburgh have shown immense patience and have always been in every way an encouragement.

J. B. Kenworthy June 1976 University of Aberdeen

# Acknowledgements

I wish to thank

Dr D. Radcliffe of the Nature Conservancy for lists of species mainly alpine from the Western Mountains

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Mr A. G. Kenneth of Ardrishaig for lists from the northwest which included new localities and species of *Hieracia* 

Mr P. Sell who not only named but supplied a record of that genus in Sutherland

Mr J. Dandy who supplied a record of *Potomageton* Dr Yeo who named all my gatherings of *Euphrasia* Dr Edees who named the *Rubi* 

Professor J. R. Matthews who named the Rosa species
Dr Ursula Duncan for her contribution of lists from some remote areas
I am grateful to Dr Perring and his staff at Monkswood for their
constant interest in my researches

John Anthony January 1972 Edinburgh



# The County of Sutherland

From the North Sea to the Atlantic Ocean the far north of Scotland is an area quite unlike any other in Britain. Sutherland is a countryside apparently compressed by the sky into the great central plain of A'Mhoine, and a coastline torn to pieces by storm seas. A large county, the fifth largest in Scotland, it suffers from an overabundance of peat and rock. This empty landscape has hidden within it evidence of a time of trees and straths crowded with people. Now the population of Sutherland live in sheltered and fertile areas along the coast; isolated houses in scattered crofting communities.

The grandeur of the county is expressed in its extensive horizon. In many places a view of 20 miles is not uncommon. The north coast is formed of precipitous cliffs with only a few sandy beaches. From Cape Wrath to Strathy Point the cliffs are for the most part over 400 ft in height but reach 900 ft on Clo Mor. The two Kyles of Durness and Tongue, each with wide sands and set against a backcloth of high mountains, break this flat northern coastline. In contrast, Loch Eriboll with its fiord-like contours has an isolated beauty of its own and is at the same time one of the greatest natural harbours in Britain. Of the northern mountains, Ben Loyal and Ben Hope are the most outstanding, the former with its steep northern face and central castle dominating the countryside for a great distance around. Even Coldbackie Hill (the watch hill), although only 1000 ft, has imposing conglomerate cliffs rising almost vertically from the sea and commanding a view from the Hebrides to the Orkneys.

The eastern boundary with Caithness follows a watershed from Drumhollistan in the north to the Ord in the east. From Melvich to Kinbrace along Strath Halladale, the boundary is one of wild moorland and deer forest. Moving further south, Kinbrace is the gateway to the strath of Kildonan, where gold and semi-precious stones are found. Helmsdale, a fishing port of some repute in earlier times, lies at the southern end of the boundary with Caithness.

Along the south-east, bounded by the Moray Firth, is a low flat coastline fringed with sand dunes and one large inlet, the land-locked Loch Fleet. Further north, near Loth, another loch with its accompanying swamp was drained during the last century. In this area ample evidence of man's influence over some considerable time period can be found in the remains of brochs and chambered cairns on the flat coastal areas south of Loth. The south-east of the county from Brora to Bonar Bridge is the most densely populated area in the county, lying as it does on good soils derived

from friable sandstones and in an unexposed and warm climatic zone. Around Golspie these conditions result in good agricultural land and extensive woodlands.

On its southern boundary, the county is one of contrasts in scenery. From Bonar Bridge westwards up the Shin valley trees dominate the countryside; many of them planted along the Kyle of Sutherland by the Forestry Commission. The boundary then follows the course of the River Oykell, in its broad valley to a source on the slopes of Breabeg (2670 ft) and southwards along the watershed to the Cromalt Hills (1692 ft). The western end of the boundary enters the sea at Loch Kirkaig after traversing Loch Veyatie and Fionn Loch. As well as crossing a great range of geological structures from the new sandstones of the east to the very old Lewisian gneiss of the west, through Durness limestone at Elphin and Inchnadamph, the south of the county contains a wide range of plant habitats due to a variety of climatic conditions. The west coast and higher hills of central Sutherland are extremely exposed, while the east coast and Kyle of Sutherland are comparatively sheltered. The west coast of Scotland is renowned for its beauty although this is associated more with the counties of the south. However, the coastline of Sutherland has tremendous variety and beauty, from the cliffs of Stoer Head and the glorious white sands of Achmelvich to the mountains of Suilven, Cannisp and Quinag. Many sea lochs and bays along the west coast give a long, tortuous coastline which is, for the most part, rocky but with wide sandy bays at Sandwood, Scourie, Clashnessie, Stoer, Clachtoll and Achmelvich. Innumerable islands, of which Handa and Oldany are the largest lie off the coast; some are used for grazing but none are inhabited. The topography of this area is most important for plant life, since any place which affords shelter from the westerly winds can reap the benefit from a generally mild climate on the west coast. In the far north-west of the county lies the desolate and extremely exposed coastline of the Parphe, a highly inaccessible area of great beauty and interest. The Parphe was mentioned in Blaeu's Atlas as having many wolves and later Gordon cites the area as one with an abundance of red deer. The geological structure is one of Lewisian gneiss, covered by blanket peat, with scattered outcrops of sandstone and limestone while bare quartzite screes occur on Ben Stack and Foinaven.

In the interior, Sutherland is a vast plain of peat, broken only by the isolated mountain peaks of Ben Hope, Ben Loyal and Foinaven in the north; Ben Griam More, Ben Griam Beg, Ben Armine and Ben Klibreck in the centre and Ben Stack, Ben More Assynt and the trio of Cannisp, Quinag and Suilven in the west.

The county may be divided into three drainage basins. To the north the rivers drain into the Pentland Firth. These are the Dionard into the Kyle of Durness, the Hope from Loch Hope, the Borgie and the Naver into Torrisdale bay, the Strathy from Loch Strathy and the Halladale which enters the sea at Bighouse bay. To the west three large rivers flow into the

Atlantic Ocean; the Laxford from Loch Stack, the Inver from Loch Assynt and the Kirkaig from Loch Veyetie. In the third zone the rivers flow into the Moray Firth. These are the Helmsdale, Brora, Golspie, Fleet, Evelix and the Oykell with its tributaries the Cassley and the Shin. There is a very large number of lochs in the county, especially in the west, varying in size from Loch Shin (17 miles) to mere lochans. They provide an interesting and diverse habitat for aquatic plants, from the alkaline lochs of the limestone districts (also famed for their large trout) to the peaty and highly acid lochans scattered throughout the west and over the central plain.

# Geology

A short section on the geomorphic pattern of the preglacial landscapes of Sutherland is included in this flora because in many cases the composition of these older rocks has a dominating control over soil formation within the county. Thus geological formations influence the distribution of vegetation types and individual species. The geology of Sutherland is as varied as anywhere in Europe although much of the variation is found in the extreme east and west of the county, the central belt being dominated by Moine Schists.

A most important feature of solid geology in Sutherland is the great Moine Thrust plane running SSW from Loch Eriboll, which separates the eastern Moine schists from the complex assemblage of Lewisian, Torridonian and Cambrian rocks of the west. The oldest rocks of the area are thought to be the Lewisian gneisses which form the basic rock structure of Sutherland. This structure was intensively folded and metamorphosed to give a denuded surface upon which the Torridonian sandstones were laid down during the Pre-Cambrian. Relict hills of sandstone are clearly seen overlying the Lewisian strata around Lochinver. Early geologists likened Suilven, Cannisp, Cul Mor and Cul Beag to Torridonian ships on a Lewisian sea and this description is most apt. The gneiss, with its numerous intrusive dykes of basalt, granite and basic rocks, is intensively ice-worn, giving rise to grey knolls and ridges, polished smooth and bare, which retain their comparative level except towards their eastern boundary where it rises steeply to form the western flanks of Cranstackie, Foinaven, Arkle and Ben Stack. Innumerable hollows have been scooped out by ancient glaciers and these now form hundreds of lochans, which with the large expanses of bare rock, are characteristic of this formation. In the extreme north, near Cape Wrath, Torridonian sandstones form magnificent sea cliffs at Clo Mor.

The Cambrian strata, including Durness limestone, overlie Torridonian sandstones. Mudstones, quartzites and grits are also included in this period. Quartzite forms a variable layer up to 500 ft thick in places, capping the sandstones on Foinaven in the south, while forming the sea cliffs of Whiten Head in the north. This quartzite breaks up into sharp fragments resulting in large screes which characterise the landscape. Where quartzite predominates the land is barren and devoid of vegetation. In its upper surfaces this old sea bed is fine grained and compact and has, running at right angles, cylinders of the same material caused by the action of sand worms. This gives the name pipe-rock to the quartzite. Above the

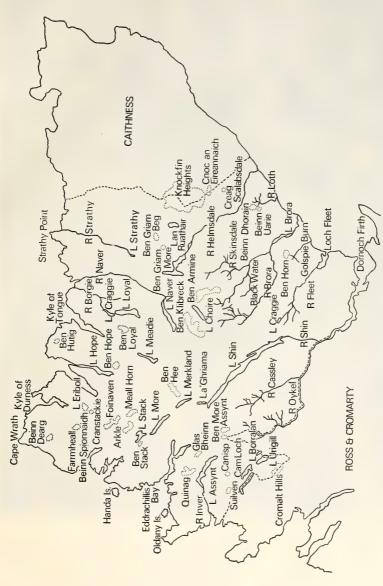


Fig. 1 County of Sutherland. Place names mentioned in the text

pipe-rock is a band of brown calcareous shale, with thin dolomite beds and flaggy grits up to 50 ft thick which are traversed by dark markings, originally attributed to sea-weeds, and thus named fucoid beds. On weathering the shale produces a yellowish clay, which being lime-rich, has marked effects upon the accompanying vegetation. The upper layer of limestone is grey in colour and outcrops from Durness to Assynt. Cambrian limestones of the Durness area are the thickest in Scotland. They are extremely variable in quality, in some places containing large amounts of dolomite, while in others siliceous matter is dominant.

Millions of years later the great Caledonian earth movements forced a mass of older metamorphic rocks, the Moine series, westward over the Cambrian series until a narrow wedge of Cambrian rocks was left exposed to the west of the Moine Thrust plane. This process gave rise to the present geological framework of two areas of Pre-Cambrian rocks separated north

to south by a band of Cambrian limestone.

The rocks of the Moine series are so called from their occurrence in A 'Mhoine, a tract of peaty moorland which extends east of the Moine Thrust. From a lithological point of view the Moinian rocks are as monotonous as the Lewisian are diversified. Highly siliceous, flaggy granulite is widely distributed within this series together with finer grained peltic rocks and bands with distorted pebbles from original conglomerates. The flattish areas at 900 to 1000 ft are the remains of planation surfaces with Ben Hee and Ben Klibreck as inselbergs (island mountains) of Pre-Cambrian rock rising from a Triassic desert. This wide tract of country, from Whiten Head to the Cromalt Hills, westward to Strath Halladale and Strath Ullie, is covered with deep peat forming rough moorland and bog.

From the Dornoch Firth to Helmsdale there lies a belt of Old Red Sandstone some five miles wide. Traces of this formation occur on the summit of Ben Armine and at Strathy and Tongue on the coast. Ben Griam More and Ben Griam Beg form terraced pyramids of conglomerate. Ben Loyal owes its distinctive outline to the massive crystalline syenite of

which it is composed.

Between the Old Red Sandstone and the Moray Firth, from Golspie to Helmsdale, lies a narrow belt of the newer rocks forming successive layers of sandstone, shale and limestone. These rocks are overlaid with later glacial drifts and boulder clay. More recent still are the peat deposits and the areas of blown sand which form dunes at many places around the coast.



(J. B. Kenworthy)

Plate 1 Sedum rosea Roseroot



 $(J.\ B.\ Kenworthy)$ 

The complex nature of geological structures, extreme conditions for weathering and the glacial outwash process have led to a wide array of soil structures in Sutherland. Modification of these chemical and physical units has taken place since the last glaciation over a period of 10,000 to 15,000 years. High precipitation and low evaporation in northern climates results in a net downward movement of water. In addition, the influence of man in promoting grazing and burning has modified the vegetation thereby affecting soil development.

The soils of Sutherland are dominated by the products of older metamorphic rocks and are generally acid. The reasons are threefold; the soils are derived from a solid geology which is low in bases such as calcium and magnesium; the rocks are not weathered rapidly; and most of Sutherland is in an area in which movement of water in the soil is predominantly downward. Thus a situation arises that any plant nutrients which are released from rocks in the weathering process are quickly rendered unavailable to the vegetation. For large parts of Sutherland the main source of plant nutrition is rainwater.

In regions with outcrops of limestone, dolomite, calcareous schists, hornblende schists, calcareous sandstone etc., bases, mainly calcium and magnesium, derived from the easily weathered rock structures, replenish

the soil with nutrients and ameliorate soil acidity.

In such areas the effects upon soil and vegetation are most marked. This feature is very striking all along the edge of the Moine thrust, but particularly easily viewed along the shores of Loch Eriboll between Kempie and Heilam, at Durness on the massive outcrops and further south at Inchnadamph. The contrast with more acid soils is apparent in the absence

of undecomposed organic remains in these soils.

Much of the soil in Sutherland is made up from organic remains of plants accumulating under anaerobic, acid conditions. The major formation is blanket peat developed as a continuous layer of acid organic material, sometimes formed on bare rock but usually over a mineral skeletal soil—always in areas of high rainfall or high humidity. This layer varies in thickness from a few centimetres to over a metre. The upper part of the peat is made from undecomposed vegetation, usually composed of Trichophorum caespitosum, Eriophorum and Sphagnum spp. in the west, whereas on the east and north coasts Calluna vulagaris and Erica spp. are the contributary species. The former give a dark amorphous peat and the latter a browner fibrous peat. In the west this peat formation can often be

recognised from a distance as eroded hags with shining west faces made up from the moss *Rhacomitrium lanuqinosum*.

In areas where the topography is gently undulating ground or a flat enclosed basin, water accumulates giving rise to deeper peat sometimes greater than 10 m in depth. Conditions of this type are found throughout Sutherland but predominate in the north and west, especially in the older gneiss landscape. This topogenic peat is made up entirely from plant remains reflecting in the vegetation layers the history of climatic change in the area since the last glaciation. Layer upon layer of partially decomposed plant remains show the beginnings of post-glacial vegetation with sedges and reeds passing through drier periods when trees invaded the area. Some of the tree stumps in this area, birch and pine, remain embedded in the peat. Birch stumps occur throughout a large depth of peat whereas pine stumps occur usually in one layer but some times as two distinct horizons. Above the tree stumps, dark peat formed from Calluna and Eriophorum is present, reflecting a cooler wetter climate. Finally the uppermost peat is mainly composed of Sphagnum spp.

Where glacial debris has been deposited in the straths of Sutherland or on rock surfaces with only a slight slope, soils have developed which show a structure involving three basic horizons. The mineral soil consists of an A horizon from which minerals and in some cases small particles have been removed; a B horizon into which minerals are deposited and a C horizon of unaltered parent materials. This is usually capped by organic debris in various stages of decay in which the name of the horizon describes the organic matter and its state of decay, litter, fermentation and humus.

A brown earth soil develops in association with herb rich vegetation, usually bearing birch forest in the north and east with oak in the west, or where trees have been removed, good agricultural grassland. Here the A and B horizons are indistinct and good mixing in the soil maintains a relatively even distribution of minerals within the soil, showing little signs of leaching.

If the underlying rocks are poor in minerals and soil develops in an area of high rainfall, above the tree line or where heather has been encouraged by grazing and burning, then a podsol of some type may result. Podsols are characterised by a leached A horizon from which the sesquioxides of iron and aluminium have been removed leaving an ash grey layer. These compounds, together with other nutrients, are deposited at a lower level within the soil giving either a red stained layer of soil, in the case of the iron podsol, or two layers red stained with iron and black stained with humus particles in an iron humus podsol. Throughout central and eastern Sutherland the thin iron pan podsol with a characteristic well defined layer of oxides, 20–30 cm below a cap of raw humus, is widespread. These soils are easily examined in roadside quarries on the A836 and the A897.

Richer soils are confined to straths in the north and east whereas the strong influence of Durness limestone is seen in the west. Rendzinas are

soils which develop from highly calcareous parent material as shallow soils dark brown in colour and generally with a low clay content. They form a neutral mull-like humus. In Sutherland they support largely grassland and agricultural land having in general a great diversity of species, both higher plants and cryptogams. Rendzinas are found from Balnakiel in the north to Inchnadamph in the south.

On high ground in the east as in the west above 2000 ft the soils are thin and skeletal. These mountain tundra soils have poorly developed horizons caused by weak chemical or biological processes. Such soils are formed under very cold conditions and are composed of angular fragments. In patterned mountain tundra soils the fragments are frost sorted to form solifluction terraces usually bounded by vegetation (Crampton, 1912). The Hamada mountain tundra soils have a continuous layer of fragments with frost sorting absent.

Among the more infrequent soils, one is particularly important in the coastal vegetation of Sutherland. At Invernaver calcareous sands containing 2–4 per cent CaCO<sub>3</sub> are blown by coastal winds to a height of 400 ft above the beach. The calcium is derived from shell fragments in the sand. On this sand, which shows little development into horizons, except for banding caused by fresh additions of sand, *Dryas octopetala* is probably as abundant as anywhere in Britain. Where springs seep through the sand, calcareous flushes develop in which *Primula scotica* is to be found.

### Climate

The climate of Sutherland shows a wide range of variability. A striking contrast exists between the wetter, milder, climate of the more exposed and rugged west coastal district and that of the drier eastern and northern shores. In the western coastal zone the prevailing winds during the winter and summer months are from the south-west. These bring abundant moisture from the Atlantic Ocean. Rain occurs on more than 200 days each year. The annual average rainfall is 150 cm (60 in.) while the mean annual temperature is 10°C (50°F). The lowlands on the Moray Firth coast lie in the dry belt of eastern Scotland; the average annual rainfall is 77 cm (31 in.). During the spring and early summer cold northerly and northeasterly winds prevail, often bringing sea-fog. The mean annual temperature is 6.2°C (45°F). A further difference is in the range of temperature. In the west the January mean is 6.2°C (45°F) and that of July 12.2°C (54°F). The comparative figures for the east are, January 3.3°C (38°F) and July 14°C (57°F). In the north coastal region, as in the east, cold northerly and north-easterly winds blow during the spring and early summer; the average rainfall is 90 cm (36 in.) and the mean annual temperature 6.2°C (45°F). In all coastal areas snow seldom lies long and the winters are comparatively mild for these latitudes. In the interior, however, the climate is more rigorous. The winters are long and severe, with snow persisting on the hills. Rainfall is high, especially in the western hills, Ben More Assynt 250 cm (100 in.), but declines towards the east. In all areas wind exerts a profound influence, often blowing at gale force, but precise data are not recorded. In these latitudes the amount of daylight differs widely between summer and winter. On the north coast daylight in June approximates 20 hours per day while in January there is scarcely 6 hours. The daily average amount of sunshine in summer is 3 hours and in winter 1 hour. Due to the low elevation of the sun many areas particularly in the valleys receive no sunlight during some of the winter months.

On the whole then, the summers have long daylight but winter days are short and in the autumn frosts come early affecting the valleys which are shaded from the sun by high hills. The winters are long, dark, dreary and boisterous.

Birse and Dry (1970) have assessed the climate of Scotland on the basis of accumulated temperature above 5.6°C and potential water deficit. Such parameters are thought to contribute to a major control of plant growth in terms of potential growing season and utilisation of available water.

Their classification produces approximately eighteen climatic sub-types of which fifteen are present in Sutherland. Of this wide range of sub-types, those described as 'warm' have accumulated temperatures of over 1375 day degrees and are absent from Sutherland, while others ranging through 'fairly warm' (1100–1375 day degrees) 'cool', 'cold', 'very cold', to 'extremely cold' (0–275 day degrees) are present. These units cover the range 'dry' to 'wet' and occur over a physiographic range from lowland to mountain. However, any assessment of climate for Sutherland suffers from a lack of information; the whole county map being based upon six weather stations.

A large part of Sutherland is classified as cool wet foothills and uplands, slightly drier in the east but still rather wet. A coastal zone of fairly warm moist lowland stretches around the west and north coasts in a band, which is never more than 5 miles wide. On the north coast it rapidly merges with a 'cool' zone whereas on the west coast the transition may take 10 or 20 miles and traverse warm but increasingly wetter zones.

Another climatic feature which dominates the Sutherland scene is exposure. In a second climatic map Birse and Dry (1970) have used exposure and accumulated frosts as a basis for their climatic regions. As the assessment of exposure is based largely upon changes in terrain and this is so variable in Sutherland, the picture produced is extremely complex. Most of Sutherland is classified as 'exposed', 'very exposed' or 'extremely exposed', having average wind speeds ranging from 4.4 m/s (8.9 m.p.h.) to greater than 8.9 m/s (18.0 m.p.h.). The only areas classified as sheltered are stretches of country around Bonar Bridge, Strath Oykel, west of Dornoch and a small area near Loch Brora. These have a mean windspeed below 2.6 m/s (5.85 m.p.h.).

The 'moderately exposed' region having wind speeds between 2.6 and 4.4 m/s is generally absent from the west coast but stretches inland along the straths of the east and north coasts. These areas represent the drainage pattern of the sloping Moine thrust which is normally N.W.—S.E. but is also cut to the north by Strathnaver and Strath Halladale. This area of sheltered to moderately exposed ground covers only 10 per cent of Sutherland but is of considerable importance to the general flora of the area, corresponding to the main limits of natural woodland. Woodland is mainly birch forest but with pine, rowan and hazel and, in some places (Assynt) oak; birch and rowan extend beyond this area into exposed sites as high as 1000 ft on Ben Loyal.

The effect of climate on vegetation is very clearly demonstrated, even to the casual observer, on the road from Bonar Bridge to Tongue. Passing along the Kyle of Sutherland the vegetation is largely wooded with some plantations. Stands of birch show a high proportion of Betula pendula interspersed with planted beech and oak. The decrease in tree cover becomes obvious around Lairg or on the high road above the Falls of Shin, where birch is the dominant tree and Betula pubescens ssp odorata the

species. There is a marked change in climate to cool, rather wet, moderately exposed with moderate winters. Along Strath Tirry to Crask the climate changes mainly in having a greater exposure. Large stretches of this area, with easy access to the main road, have been planted in the past 15 years, although native trees are few and far between, occurring only in sheltered areas and away from grazing pressure. Beyond Crask there is little planting until one descends into Strath Vagastie. Here isolated trees of birch, hazel and rowan line the river side. The high area between Crask and Altnaharra is classified as cool, wet, exposed with rather severe winters. Altnaharra on the shores of Loch Naver has a much better climate. This area, described as cool, wet, moderately exposed, with moderate winters, has plantations around Altnaharra Lodge and extensive natural birch woods on the northern slopes of Ben Klibreck.

Along the shores of Loch Naver on the Bettyhill road, the climate improves rapidly so that even at Syre, some 15 miles from the coast, the climate is classified as fairly warm, rather wet, moderately exposed with moderate winters. Apart from this small area of ameliorated climate, the road to Tongue continues through an area of cool, wet, exposed country with moderate winters until one descends into the Kyle of Tongue where a remarkable change occurs over a short distance on the northern slopes of Ben Loval.

An increasingly large area of land adjacent to this road is being planted with Sitka spruce and *Pinus contorta*, with a few amenity species on the road-side. It is the change in what is left of natural woodland which is most interesting. Two species of birch form the major tree cover with rowan, hazel and alder occurring irregularly. Although *Betula pubescens ssp. odorata* occurs wherever trees are present on this 50-mile traverse of Sutherland, *Betula pendula* is found only in three areas along the road and these coincide with the most moderate climates. At the southern end up to Inveran the species is frequent but absent from Lairg to Tongue, except for a small number at Altnaharra which may have been planted.

## **Botanical Districts**

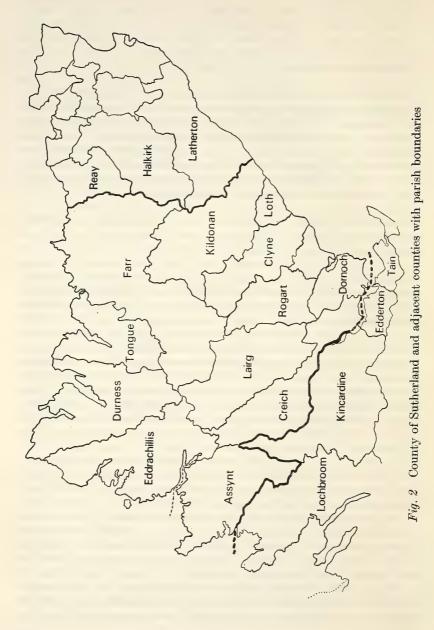
In his scheme for the recording of plant distribution in Great Britain, H. C. Watson divided the county of Sutherland into two vice-counties: East Sutherland (v.c. 107) the area drained by rivers flowing southeastwards into the Moray Firth and West Sutherland (v.c. 108) where the rivers flow west and north into the Atlantic Ocean. Vice-counties are here further subdivided into smaller districts – the parishes. These parishes are based on the river systems and their mutual boundaries are, for the most part, traced along the watersheds. The parishes are as follows:

v.c. 107

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN v.c. 108

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

Creich lies in the south of the county. It is bounded on the west by Assynt, on the north-west by Eddrachillis, on the north-east by Lairg and Rogart, on the east by Dornoch and on the south by Ross and Cromarty from which it is separated by the River Oykell from its source on Ben More until it flows into the Kyle of Sutherland and Dornoch Firth. The parish extends to 173 square miles and comprises the left bank basin of the Oykell river. The underlying rocks are schists of the Moine series and in the north-west Cambrian quartzite on the hill tops. The land is everywhere hilly but mountainous in the north-west where it reaches an elevation of 3273 ft on Ben More Assynt. The greater part of the parish is high bleak moorland. Arable land occurs on the low ground from Invershin to Bonar Bridge, while the lower slopes are planted with pine and oak woods. By the Kyle of Sutherland the marshy meadows are fringed with alder and willows, Iris pseudacorus and Filipendula ulmaria. The Shin valley is well wooded with birch interspersed with ash, elm, bird cherry and gean. The ground flora includes Anemone nemorosa, Ajuga reptans, Endymion non-scriptus, Lysimachia nemorum, Oxalis acetosella, Trollius europaeus, Viola riviniana, Veronica chamaedrys and the rare Ranunculus auricomus. In the oakwoods are found Juniperus communis, Lathyrus montanus, Lonicera periclymenum, Luzula campestris, L. pilosa, L. sylvatica, Stellaria nemorum, Teucrium scorodonia and Trientalis europaea. Species of Rubus and Rosa abound on the roadside. More interesting, however, is the considerable range of montane species growing at altitudes up to 3000 ft on Ben More Assynt. In addition to the commoner species such as Alchemilla alpina, Arctous alpinus, Armeria maritima, Carex bigelowii, Cerastium alpinum, Empetrum



hermaphroditum, Luzula spicata, Trollius europaeus, Silene acaulis there are the rarer Juncus trifidus, J. biglumis, J. castaneus, Draba norvegica, Poa alpina and Deschampsia alpina.

Lairg, an inland parish of 194 square miles, is bounded on the north by Farr, on the east by Rogart, on the south by Creich and north-west by Eddrachillis. The parish consists of the broad valley formed by the chain of lochs – Merkland, a'Ghriama, and Shin. The hills along the watershed north and south of the lochs rise to 1000 ft and on the northern boundary to 2864 ft on the shoulder of Ben Hee. The numerous streamlets all drain into the lochs. The underlying rocks are of granite and schists. The whole area is peat covered. At Shinness, at the southern end of Loch Shin, a considerable area has been reclaimed for agriculture. Recently the level of the lochs has been raised by a dam at the south of Loch Shin, while a second dam in the Shin valley below Lairg has formed a new loch eliminating a large marsh. Extensive new forestry plantings have been made in Strath Tirry. Accompanying these changes there has been road reconstruction. The Flora of the parish is of a typical moorland type.

Rogart – like Lairg an inland parish – is bounded on the north by Farr, north-east by Clyne, south-east by Golspie, south by Dornoch, south-west by Creich and west by Lairg. Its area is 97 square miles. The northern part of the parish is drained by the upper reaches of the Brora river and the southern part of the Fleet river. The land is hilly with elevations ranging from 600 to 1000 ft on the boundary hills. The rocks are of gneiss and granite, covered with peat, so that the parish is mostly moorland and bog. In Strath Brora and Strath Fleet there are some 2000 acres of arable land. In the vicinity of Rogart village the following species, all very rare in the county, are to be found: Barbarea vulgaris, Equisetum pratense, Helianthemum chamaecistus, Lemna minor, Lepidium heterophyllum, Nuphar pumila, Lythrum portula, Teesdalia nudicaulis and Vulpia myuros.

Dornoch parish lies in the south-east of the county. It is bounded on the west by Creich, on the north by Rogart, Golspie and Loch Fleet and on the east and south by the Dornoch Firth. A small parish of some 34 square miles, it has a relatively long coastline (12 miles), which is low and sandy and fringed with dunes and links. Inland the land is hilly and rises gently to 1100 ft in the north-west. The rocks are mainly of sandstone. The soil near the coast is sandy, further inland of a black peaty loam bearing coniferous plantations. The lower slopes of the hills are occupied by crofts. Plants, very rare in Sutherland, occurring at Cuthill Sands are Teesdalia nudicaulis and in a pond Lythrum portula; in a marsh at Dornoch Lemna minor, Ranunculus sceleratus and Typha latifolia grow sparingly – all threatened with extinction due to drainage. An interesting area about 1½ miles in extent lies west of Dornoch Point and shows transitions from

salt marsh to links. Characteristic plants here are Armeria maritima, Aster tripolium, Plantago maritima, Salicornia europaea, Suaeda maritima, Spergularia media, Triglochin maritima, Particularly on areas where turf has been removed are Juncus gerardii, J. balticus, both abundant, and Carex maritima, scarce. On damp grassy places grow Coeloglossum viride, Listera ovata, Dactylorchis incarnata, D. purpurella and Centaurium littorale. On the links Astragalus danicus, Arabis hirsuta, Sedum acre, Juniperus nana, Empetrum nigrum, all plentiful and Draba incana and Antennaria dioica rare. On the sandy shore Cakile maritima, Salsola kali and Atriplex glabriuscula abound. Another interesting area is at Cambusmore. Saxifraga hypnoides (at sea-level) Helianthemum chamaecistus both frequent, and Agrimonia eupatoria (scarce), while on cliff ledges Sorbus rupicola. Ajuga pyramidalis and Orthilia secunda, all very rare, are to be found. The birch woods here contain Trientalis europaea, Melica nutans and M. uniflora. In the very wet areas are Carex remota, C. curta and Equisetum palustre. The somewhat brackish areas at the waters edge have Blysmus rufus (plentiful) and Glyceria maxima and Apium inundatum, both in the only localities known in the county, scarce.

Golspie parish is bounded on the west by Rogart, on the north and northwest by Clyne, on the south-east by the Dornoch Firth and on the south by the Loch and River Fleet which separate it from Dornoch. It extends to 35 square miles. The coast is low and sandy with dunes and links but north of Golspie village it is low and rocky. On the shore at Golspie is a dense tract of Elymus arenarius with Cakile maritima and Atriplex species. Inland is a large triangular tract of arable land, the best in the county. On the low sandy flats and lower slopes of the hills are coniferous plantations with a ground flora of Vaccinium myrtillus and Calluna. Interesting plants here are Goodyera repens and Trientalis europaea, both species plentiful, and Purola minor, Moneses uniflora and Linnaea borealis all very scarce. The Golspie burn rises in the north and runs through the middle of the parish. In its lower course through Dunrobin Glen its banks are well wooded with alder, birch, ash, elm, oak, gean, bird cherry and goat willow. In the policies of Dunrobin Castle are many exotic trees. On the Mound rock Saxifraga hypnoides, Helianthemum chamaecistus and Ajuga pyramidalis - very rare. Rosa and Rubus species abound in the hedgerows and roadsides.

Clyne parish, in extent 118 square miles, is bounded on the north-west by Farr, on the north-east by Kildonan and Loth, on the south-east by the Moray Firth and on the south-west by Golspie and Rogart. The sea-coast,  $3\frac{3}{4}$  miles long, is low and sandy. The underlying rocks bordering the coast are of sandstone, shale, limestone and coal; inland of schists. The land is hilly rising in the north-west to the shoulder of Ben Armine on which arise tributary streams which join the Brora river before it enters Loch

Brora. The surface is almost all moorland and rough pasture. In the birch woods bordering the loch grow *Trientalis europaea*, *Corydalis claviculata* and on rock ledges the rare *Orthilia secunda*.

Loth, the smallest parish in the county, extends to 29 square miles. It is bounded on the north by Kildonan, on the south-west by Clyne, and on the south-east by the Moray Firth. It comprises the drainage basin of the Loth river with its tributaries and several streamlets all of which reach the sea by deeply cut gorges clothed with birch and willow. The short coast line is sandy with dunes and a few rocky headlands. Inland is a narrow zone of cultivated fields with a fertile soil. In the cornfields Centaurea cyanus is abundant. On the roadside Calystegia sylvatica and Pentaglottis sempervirens are frequent. Rubus species line the hedgerows. Above the road the ground rises steeply. The lower slopes are occupied by crofts. Towards the northern boundary the hills rise to 2000 ft on Bein Uarie. The rocks are of red sandstone and on cliff ledges and screes Sedum rosea, Saxifraga hypnoides, S. stellaris and Chamaepericlymenum suecicum occur. On the moors Alchemilla alpina, Lycopodium selago, L. alpinum (very scarce) and Rubus chamaemorus grow. In Glen Sletdale Lemna minor has recently been recorded.

Kildonan parish comprises the drainage basin of the Helmsdale river with its tributaries and extends to 210 square miles. It is bounded on the west and north by Farr, on the east by Caithness, on the south-east by the North Sea and on the south by Loth and Clyne. The coast, scarcely 5 miles long, has a shingle beach from which the ground rises steeply while to the north of Helmsdale it is formed of cliffs rising to 650 ft at the Ord. In the north-west are many large lochs the streams from which unite to form the Helmsdale river which flows through a wide valley and passing through a narrow gap enters the sea at Helmsdale. The hills on the Caithness border range from 900 ft at the Ord to 1900 ft on Creag Scalabsdale. In the north stand the two Ben Griams each over 1900 ft, on the southern border the land rises from Eldrable hill (1338 ft) at Helmsdale to the shoulder of Ben Armine (2338 ft). The underlying rocks are granite, syenite and gneiss. The surface is for the most part, rough pasture and moorland with small areas of arable land at Kinbrace, Kildonan and Helmsdale where land has been reclaimed. In sheltered parts of the valleys scrub birch with willow are widespread. An interesting alpine flora is to be found on the upper slopes of the Ben Griams, which are topped with old red sandstone debris: Alchemilla alpina, A. filicaulis, Arctous alpinus, Asplenium viride. Cardaminopsis petraea, Carex bigelowii, Cerastium alpinum, Draba incana, Dryas octopetala, Empetrum hermaphroditum Epilobium anagallidifolium, Galium sterneri, Loiseleuria procumbens, Luzula spicata, Polystichum lonchitis, Potentilla crantzii, Salix myrsinites, Saussurea alpina, Saxifraga oppositifolia and Sedum rosea. In waste places round Helmsdale are some plants with restricted distribution in the county: Bromus sterilis, Conium maculatum, Hordeum murinum, Malva sylvestris, Senecio viscosus, Torilis japonica, Veronica hederifolia and on the railway sidings Linaria vulgaris.

Assynt parish lies in the south-west of the county. It is bounded on the west and north by the sea, on the east it is separated from Creich by high mountains, and on the south by rivers and lochs from Ross and Cromarty. Its area is 183 square miles. The greater part of the parish is composed of Lewisian gneiss forming bare rocky knolls with innumerable lochans in the hollows. From the gneiss rise steep Torridonian hills of red sandstone capped with Cambrian quartzite. At Inchnadamph, Elphin and Knockan are limestone plateaux flanked by cliffs. Here are to be found the most interesting plants. Dryas octopetala is widespread and abundant. Asplenium viride, Agropyron donianum, Arenaria norvegica, Carex rupestris, Epipactis atrorubens, Galium sterneri, Polystichum lonchitis, Rubus saxatilis, Sorbus rupicola. Silene acaulis and Thalictrum alpinum occur. On the hills Arctous alpinus, Armeria maritima, Potentilla crantzii, Carex bigelowii, Lycopodium alpinum, L. selago, Salix myrsinites and Saussurea alpina are frequent. In the lochans Nymphaea alba, Lobelia dortmanna, Potamogeton natans, Sparganium angustifolium and Subularia aquatica abound. Trollius europaeus is common in the fields, Vicia orobus on the roadsides. Notable plants on the sea-shore are Mertensia maritima and Sagina saginioides, both rare.

Eddrachillis parish, 226 square miles, is bounded on the west by the Atlantic Ocean, on the east by Durness, south-east by Lairg and Creich, and south by Assynt. The coast, much indented by fiord-like lochs, consists of precipitous cliffs interspersed by sandy and shingle bays. Inland the land is hilly, dissected by glens, and rises to 2980 ft on Foinaven and 2863 on Ben Hee. The rocks are mainly of gneiss, bare and hummocky, red sandstone hills and some limestone. Plants of the sea coast are Silene acaulis, S. maritima, Saxifraga oppositifolia, Sedum anglicum, S. rosea, Plantago maritima, P. coronopus, Armeria maritima, Asplenium marinum, A. adiantum-nigrum, Juniperus communis ssp. nana. Populus tremula and Hedera helix. In lochans are Utricularia minor, U. intermedia, U. neglecta, Sparganium angustifolium, S. minimum, Myriophyllum alterniflorum, Nymphaea alba, Lobelia dortmanna, Subularia aguatica. On the hills Arctous alpinus, Acchemilla alpina, Antennaria dioica, Carex bigelowii, Empetrum hermaphroditum, Loiseleuria procumbens, Lucopodium alpinum, L. selago are common.

Durness parish, 234 square miles, occupies the north-western corner of the county. On the north-west and north it is bounded by the Atlantic Ocean, on the east by Tongue and Farr, and on the west by Eddrachillis. It is the most sparsely populated parish in Scotland (2·4 persons per square mile). The coast is mainly of precipitous cliffs. There are two inlets, the shallow

Kyle of Durness and the longer deep-water Loch Eriboll. To the west of the Kyle is the undulating plateau – the Parphe. The rocks here are of Lewisian gneiss and Torridonian sandstone. The surface is covered with deep peat and accordingly the region is bleak moorland and peat bog. Between the Kyle and Loch Eriboll lies a range of hills attaining an elevation of nearly 3000 ft at Foinaven. The western flank of the hills is formed of gneiss and the eastern slopes of Cambrian quartzite, and so their vegetation is scanty. East of Loch Eriboll the rocks are quartzite and schists of the Moine series, resulting in a desolate moorland to the south of which stands Ben Hope (3040 ft). Forming a triangular tract round Durness village and a narrow zone on the south-western shore of Loch Eriboll are limestone rocks giving rise to good pasture land. At Balnakeil Bay there is a stretch of shell sand, which inland forms a machair.

On the cliffs at Cape Wrath and Faraid Head, Silene acaulis and Saxifraga oppositifolia are frequent. Thalictrum alpinum occurs on the shore at Koeldale. On the limestone Dryas octopetala is abundant, Carex rupestris and Epipactis attroubens scarce. In a bog over-lying limestone near Durness these species flourish: Pinguicula vulgaris, P. lusitanica, Drosera anglica, D. rotundifolia, Carex flacca, C. echinata, C. pulicaris,

Primula scotica and Tofieldia pusilla.

Common on all the hills are Alchemilla alpina, Arctous alpinus, Arctostaphylos uva-ursi, Carex bigelowii, Empetrum nigrum, E. hermaphroditum, Juniperus communis ssp. nana, Loiseleuria procumbens, Lycopodium alpinum, L. selago, Polygonum viviparum, Salix herbacea, Saxifraga stellaris, S. oppositifolia, Saussurea alpina, Sedum rosea, Selaginella selaginoides and Thalictrum alpinum. On the western cliffs of Ben Hope are Cardaminopsis petraea, Draba norvegica, Potentilla crantzii, Salix lapponum, S. reticulata, Pyrola rotundifolia (the only locality in the county) and P. minor. On the summit of Foinaven are Armeria maritima, Cardaminopsis petraea, Cherleria sedoides, Juncus trifidus, Silene acaulis, S. maritima, Luzula spicata, while on Meall Horn to the south Asplenium viride, Draba incana, D. norvegica, Poa glauca, Polystichum lonchitis, Saxifraga nivalis, are found along with other montane plants.

Tongue is bounded on the north by the Atlantic Ocean, on the east and south by Farr, and on the west by Durness. It extends to 136 square miles. The coast consists of precipitous cliffs, some sandy bays and a long shallow inlet, the Kyle of Tongue. To the west of Kyle lies the Moine, an undulating tract of bog and moor in the north of which rises Ben Hutig on which Arctous descends to some 500 ft. On the shores of the Kyle, Tongue woods contain many exotic trees while in the coniferous plantations grow Listera cordata, Goodyera repens and Pyrola minor. The chief river is the Borgie from Loch Loyal. Equisetum telmateia is found on its banks in its upper reaches, the sole locality in v.c. 108. Above Loch Loyal stands the picturesque Ben Loyal. Among the many species are Alchemilla alpina,

Draba incana, Chamaepericlymenum suecicum, Epilobium anagallidifolium, E. alsinifolium, Gnaphalium supinum, Poa glauca, but of special interest is the abundance of Betula nana in a bog between this hill and Ben Heil. On the island off Skerray, at Melness and Coldbackie, Radiola linoides occurs. At Tongue Bay Alchemilla alpina and Oxyria digyna descend to the cliff tops.

Farr, a very large parish of 417 square miles, is bounded on the north by the Atlantic Ocean, on the east by Caithness, on the south by Kildonan, Clyne, Rogart and Lairg, and on the west by Eddrachiles, Durness and Tongue. The coast consists of cliffs and sandy bays. Near the coast there are many bare rocky outcrops. Inland the land is hilly culminating in the south at Ben Klibreck (3154 ft) and in the south-west in Ben Hee (2864 ft). The rocks are mainly schists of the Moine series, granite in Strath Halladale. The parish is for the most part moorland but there is arable land in Strathnaver, Strath Halladale and at Strathy, Kirtomy and Bettyhill. Characteristic plants of the sea-cliffs are: Armeria maritima, Asplenium marinum, Cochlearia officinalis, Ligusticum scoticum, Plantago maritima, P. coronopus, Sagina maritima, Silene maritima, Sedum rosea, Tripleurospermum maritimum and Vicia sylvatica. Plants, unusual in the north are Ononis repens, a rayless form of Senecio jacobaea and Tragopogon minor on the dunes, while in the cultivated fields Centaurea scabiosa, Knautia arvensis, Euphrasia brevipila and its variety reagensis abound. On the machair above Farr Bay are Antennaria dioica, Arabis hirsuta, Botrychium lunaria, Coeloglossum viride, Campanula rotundifolia, Draba incana, Dryas octopetala, Listera ovata, Oxytropis halleri, Pimpinella saxifraga, Polygonum viviparum, Primula veris and Salix repens. On the cliff tops Primula scotica, Scilla verna and Euphrasia marshallii abound. On cliff ledges and screes from Farr to Kirtomy Sagina saginoides is to be found. An area of particular interest is the hill west of the mouth of the Naver. Here Carex maritima and Dryas octopetala are abundant. On the cliff grow Asplenium adiantum-nigrum, A. ruta-muraria, A. trichomanes, Cystopteris fragilis, Epipactis atrorubens, Saxifraga aizoides and S. oppositifolia. On Ben Klibreck, in addition to the common alpine species is the rare Athyrium alpestre. In a bog nearby, the very rare sedge Carex chordorrhiza has its only habitat on the mainland of Great Britain.

# **Botanical Exploration**

Though the County of Sutherland was without roads until the beginning of the nineteenth century, several travellers had already journeyed there and recounted the hardships of travel. Pennant, who with Lightfoot, entered the county at Knockan in 1772 proceeded only a few miles further to Ledmore where he relates 'the way was impassable for horses three miles further on and that even a foot messenger must avoid the hills by crossing an arm of the sea'.

Nevertheless botanical exploration had already begun. J. Robertson (1768) (a pupil of Dr John Hope) discovered Oxytropis halleri at Farr in July in abundance and wrote a detailed description of the plant and its habitat accompanied with an excellent plate. He revisited the area in August to collect seed but was disappointed as only a little was to be found, the scarcity he attributed to the fact that the plants were grazed

by cattle.

About this time also there existed the Hortus Siccus of Dr John Hope (Professor of Botany at Edinburgh) the species in which are listed by I. B. Balfour (1907). These included many plants from Sutherland which had been gathered over a wide area. 'At Dunrobin all along the coast is Saxifraga tridactylites; at Culgower, Ajuga pyramidalis; along the north coast, principally at Farr, Centaurea scabiosa (plentiful), Gymnadenia conopsea (frequent), Oxytropis halleri, Primula scotica and Dryas octopetala; on the north-west coast Draba incana and Scutellaria galericulata (plentiful); Saxifraga oppositifolia on the rocks at the sea-side at Tongue; S. aizoides on all the rivulets in the north; on all the high hills Rubus chamaemorus and Loiseleuria procumbens (plentiful); Arctous alpinus on Ben Griam and several other hills; a Carex (nova species) at the mouth of the Naver and Ulmus in Assynt.'

Thomas Pennant (1774) made a tour of Scotland in 1772 bringing with him the Rev. John Lightfoot who was to collect material for a Flora of Scotland. Lightfoot collaborated with many botanists for his Flora Scotica (1777). Here Dr Hope's Sutherland plants are recorded and in addition Dryas octopetala, Asplenium viride and Polystichum lonchitis

which he had seen in Assynt.

W. J. Hooker (at this time Professor of Botany at Glasgow) along with W. Borrer visited many places in Scotland for material for his *Flora Scotica* (1821), in which special mention is made of some Sutherland plants. Of *Pinguicula lusitanica* he writes 'nowhere have I seen it so plentiful as in Sutherland upon the wet moors adjoining Cape Wrath. *Dryas octopetala* 

is common all along the coast of Sutherland; Oxytropis halleri at the Bay of Farr, Armadale and Invernaver; Primula scotica on pastures by the sea at Bighouse and Armadale Bays; Carex maritima, discovered at the mouth of the Naver by Dr Hope, is on the sands between the Brora and Helmsdale rivers; Draba incana on the heaths on the east coast at Wilkhouse Inn; Mertensia maritima common on the coast of Sutherland'.

On a voyage round the coast of Scotland the Rev. John Fleming (1823) – Professor of Natural History at St Andrews – called at Eriboll and noted Chrysosplenium oppositifolium, Dryas octopetala, Phyllitis scolopendrium and Sedum rosea while at Faraid Head were Coeloglossum viride, Listera ovata, L. cordata and Thalictrum alpinum.

Dr Robert Graham (1826, 1828, 1833) - Professor of Botany at Edinburgh - on three expeditions added considerably to the Flora. In 1825 on the summit of Foinaven were Luzula arcuata, Deschampsia alpina (vivipara) and Cardaminopsis petraea growing on disjointed quartz. More extensive explorations in 1827 and 1833 added Luzula arcuata, Poa alpina and Deschampsia alpina on Ben More Assynt. On Ben Hope, Draba norvegica, Salix reticulata (sparingly), Potentilla crantzii and Minuartia rubella 'of which I found a single plant somewhere on Ben Hope in 1825, but this season (1833) again in tolerable quantity on the point of one cliff.' At Koeldale he noted, 'Dryas octopetala, Thalictrum alpinum, Primula scotica and Glaux maritima growing in contact forming a group which can be seen nowhere else in Britain'; Epipactis atrorubens in abundance at Koeldale and in Assynt on limestone rocks and in the latter place Sorbus aria; Cladium mariscus near Badcall in a marsh, in large quantity but flowering sparingly: Utricularia minor, much less common than U. intermedia, with one colony in flower, in Assynt; Sarothamnus scoparius, common in the east, occurs sparingly in the north in Strathnaver and one patch at Borgie Bridge; Ulex europaeus, likewise common in the east occurs all along the north coast.' These expeditions are recalled by J. H. Balfour (1865).

While the previous accounts stressed the rarer species, more comprehensive lists were recorded by H. C. Watson (1832) some ninety species noted round Golspie and (1833) about two hundred and eighty species from Farr, Tongue, Eriboll and the hills Bens Armine, Heil, Loyal and Hope. Rare and local species observed were Fumaria capreolata and Draba incana at Eriboll; Atriplex sabulosa, Conium maculatum and Eupatorium cannabinum at Farr.

In their Guide to the Highlands and Islands of Scotland, G. and P. Anderson (1834) list plants that are to be seen at the various localities which they describe.

Dr A. Murray (1836) of Aberdeen who had accompanied Dr Graham in 1827, produced The Northern Flora wherein are recorded all the known Sutherland plants – six being further records.

In the New Statistical Account of Scotland (1845) many of the Parish



 $(J.\ B.\ Kenworthy)$ 



 $(J. B \ Kenworthy)$ 

Plate 4 Chamaepericlymenum suecicum Dwarf Cornel

accounts give some botanical information. This varies considerably according to the botanical knowledge of the compiler. There is an excellent description of the Flora of Durness by Dr Graham (1845) while in that of the parish of Tongue by H. M. McKenzie (1845) we learn of changes that are taking place. Woods have been planted with ash, beech, elm, lime, plane, larch, spruce and scots pine. Whin and broom he records as introductions. Plants such as Lamium album and Silene vulgaris probably also introduced at this time are not present now. Likewise in the parish of Loth at the Ord (since transferred to Kildonan) D. Ross notes Primula scotica, Mertensia maritima and Vaccinium oxycoccus none of which are present now.

While most botanists confined their attention mainly to flowering plants, W. (1857) in a wide tour of the county listed the vascular cryptogams which he observed, many being additional species. In 1883 the second edition of *Topographical Botany* was published and from this the number of species recorded can be seen (Table 1). It is interesting to note that the mountainous western areas (v.c. 108) had received more attention than the more accessible eastern region (v.c. 107). During the next 20 years all of the several botanists who visited Sutherland added many new records besides extending the distribution of known species.

James Grant of Wick collected extensively around Golspie and in Strath Halladale recording 120 new species (Bennett, 1882, 1889, 1893). Some of the more exciting ones are from the woodlands near Golspie: Goodyera repens, Pyrola minor, Linnaea borealis and Orthilia secunda. At the Mound he noted Catabrosa aquatica and Apium inundatum which were not rediscovered until recently (1962); on the sea-shore Asplenium marinum, Valeriana olitoria and Zostera marina, species now extinct in this area; casual species likewise extinct are Matricaria recutita, Verbascum thapsus and Chenopodium bonus-henricus.

W. F. Miller (1890) collected in the north of Scotland, while at Lairg some forty new species were obtained (Bennett, 1882).

Archibald Gray and L. Whinxman (1888) traversed the county in 1886 from Inverkirkaig in the west to Torrisdale in the north, described the terrain and among their collection were seventy-four species new to v.c. 108 (Bennett, 1889). A most notable discovery was Arenaria norvegica on the hills about Inchnadamph and on river shingle at the low elevation of 400 ft.

The Alpine Botanical Club visited Sutherland about the same time and recorded comprehensive lists (Craig, 1889) of plants from Ben Loyal, Ben Hope, Invershin, Tongue and Farr.

F. J. Hanbury made several excursions to Sutherland with H. E. Fox (1885 and 1886), with E. S. Marshall (Hanbury, 1887 and Marshall, 1891) and with J. Cosmo Melvill (Hanbury, 1889). Many critical species were recorded from Melvich, Bettyhill and Durness. Along with Marshall he first noted in Sutherland the species of *Cochlearia* later named *scotica*. A

special interest of his was the genus *Hieracium* in which he named many new species several of which occur in Sutherland.

The Rev. E. S. Marshall spent a considerable time in the Highlands of Scotland over a long period (1888–1916). His many visits to Sutherland are described (1891, 1901, 1916) and along with W. A. Shoolbred (Marshall, 1897, 1898, 1909). These accounts and his extensive herbarium make a valuable contribution to the Flora of this large county. Like Hanbury he was interested in the genus *Hieracium*.

The northern forms of *Euphrasia* were another of his interests and a new species *E. marshallii* was named in his honour. With W. A. Shoolbred (Marshall, 1897) he discovered *Carex chordorrhiza* in a bog beside Loch Naver – its only locality in Britain.

G. C. Druce the author of several county floras visited Sutherland on many occasions, on three of which he wrote accounts: a visit to the limestone area at Knockan (1895), to Golspie and Invershin (1903) and in the north (1908). On these and later visits he added many additional records.

From Table 1 it will be seen that few additions were made between the appearances of the first (1905) and second (1929) supplements to Topographical Botany. During this period Crampton (1913) contributed an ecological account of the flora on Ben Armine. This contrasts with the more usual lists of species of former papers.

TABLE 1. To show number of species recorded.

		East Sutherland v.c. 107	West Sutherland v.c. 108	County of Sutherland
Topographical Botany	1883	191	307	391
1st Supplement added	1903	255	167	177
Total		446	474	568
2nd Supplement added	1925	33	34	37
Total		479	508	605
Comital Flora	1932	541	613	676
Present	1966	733	773	883

The Comital Flora (Druce, 1932) shows a great increase in the number of species recorded from the second supplement. This is in part due to variation in the concept of the species and to the recording of introduced species as well as further records.

The next account of Sutherland plants was by Wilmott and Campbell (1944) who collected in the hitherto little-worked district round Lochinver. Of the several new records, Catapodium marinum, Diplotaxis muralis, Cephalanthera longifolia, Lythrum salicaria, Oenanthe crocata, Potamogeton berchtoldii and Sisymbrium altissimum have their only Sutherland locations in this area.

In the more recent papers stress is laid on ecological factors. An area modified by blown sands is the plateau to the west of the estuary of the River Naver. This was explored by McVean and Berrie (1952) who recount the flora with special reference to the species of *Empetrum*.

At Inchnadamph, Raven (1952) made a notable re-discovery of the rare Agropyron donianum which species had previously been found by E. S. Marshall but its true identity had not been determined. The rich limestone

flora of this area is more fully described by this author (1959).

There are extensive tracts of bog in Sutherland. Pearsall (1956) has described the structure of a blanket bog in the valley of the Strathy river and noted the plants typical of each area.

Foinaven – a mountain in the north-west – was visited by Blake (1959) who described the typical flora to be found in the high exposed ridges composed of Cambrian quartzite and Lewisian gneiss. This consists of Cherleria sedoides, Armeria maritima, Silene acaulis, all cushion plants, along with Cardaminopsis petraea, Salix herbacea, Festuca vivipara and Juncus trifidus.

The rich flora of Ben Hope was examined by Ferriera (1957, 1958, 1959) who showed that the basiphilous species are confined to a narrow band of hornblende schists on the western side of the hill. Elsewhere in the arid rocks of which the mountain is mainly composed, the flora is poor in

species and similar to that found on Ben Loyal.

Of special interest are the discoveries of Ratcliffe on Meall Horn (1958), a mountain in the Reay Forest, where he observed Saxifraga nivalis and on Ben More Assynt (1960), a further locality for Saxifraga nivalis with amongst other species Deschampsia alpina, Draba rupestris, Carex saxatilis, Juncus biglumis, J. castaneus and Poa alpina. In 1962 in the south-east of the county he records Potentilla rupestris – a species not previously noted in Scotland.

During the past decade – as a result of the advent of the Map Scheme – the activities of many botanists have added some 200 additional species to the total recorded in the Comital Flora (Table 1).

# Vegetation of Sutherland

Peculiarities of the Sutherland flora associated with individual parishes are mentioned in the relevant section of the flora (p. 13). In this section a synopsis of the general vegetation classification is included because in many cases these vegetation types are widespread and not specifically considered under each parish description. The most comprehensive vegetation classification is that of McVean and Ratcliffe (1962) in Plant Communities of the Scottish Highlands and this account is based largely upon the criteria they accept in their classification. The main feature of their classification system is life-form, ranging from forests through heaths to moss heaths. In most instances this agrees with a classification based upon altitudinal zonation: large trees giving way to heaths at higher altitudes and at the highest altitudes dwarf heaths or mossy heaths. This relationship, of vegetation types having specific altitudinal zones, holds for most of Scotland but in the north and north-west, i.e. Sutherland, these zones are compressed and the general altitudinal limits lowered very considerably. Thus species which normally are confined, in central Scotland, to altitudes above 2000 ft are found at sea-level in Sutherland. Species such as Dryas octopetala, mountain avens, Saxifraga oppositifolia, the purple mountain saxifrage and Empetrum hermaphroditum, are all found within 300 ft of sea-level at Invernaver. Such are the vagaries of climate in Sutherland that only 10 miles away on Ben Loyal the tree line reaches 1000 ft. It is apparent that the life-form of plants in any one area reflects the general environmental status and does not follow a strict altitudinal zonation for this county.

The vegetation of Sutherland can be classified under eight major headings. The most obvious of these being forest and scrub. Natural ashwoods are entirely absent from Sutherland although on some of the base rich soils the ground flora of hazel scrub shows a remarkable similarity with that of ash woods further south. Native pinewood with its ground flora of Vaccinium or Vaccinium plus Calluna is absent from Sutherland although there are pinewoods especially in the south-east of the county which show typical species associated with pinewoods. Steven and Carlisle (1959) comment on the two pinewood sites in Sutherland which might be considered as native. The first, on the islands and shores of Loch Assynt, while on areas which would not be amenable to planting, are of even age, about 100 years old and pine is not mentioned in the area in the statistical accounts. This view is confirmed by John Home's survey of Assynt (1775) in which a very detailed catalogue of all the woods in the parish of Assynt

does not include pine. Secondly in the parish of Creich, on the north of Strath Oykell is a stand over 150 years in age which is considered to be a

survivor of eighteenth-century plantings.

The oak and birch woodlands of Sutherland are very similar in their ground flora and it appears that birch now occupies much of the low-lying valleys previously occupied by oak. Place names may give an indication of former oakwoods: there is a Baddidarach (Gaelic, Darach – oak) both at Lochinver and near Scourie, and there is evidence of oak woodlands along the west coast and in the south east of the county. In the early eighteenth century oak bark was a valuable commodity in the area, priced at £15 per ton from woodland at Creich. Spinningdale oakwood, Creich is now scheduled as a site of scientific interest even though many of the trees appear to be approximately 130 years old (Pennie, 1966). Oak can replace birch as the dominant species up to 500 ft in the west with little or no change in the ground flora. Where oaks do survive, the associated shrub layer of holly, bird cherry and hazel is generally absent and therefore the oak woods in Sutherland do not appear as a distinct vegetation unit.

Of the woodlands to be found in Sutherland, birchwood is the most frequent ranging from the mature woodland of Drumbeg, Assynt to isolated groups of trees on the central plateau. McVean (1964) recognises two woodland types; the Vaccinium-rich birchwoods and the herb-rich birchwoods. The former is recognised by the presence of Vaccinium myrtillus, Pteridium aquilinum and Deschampsia flexuosa; the latter by the presence of Thelypteris oreopteris and a dominance of grass species Anthoxanthum odoratum, Agrostis tenuis. The birchwoods of the north and west have bryophytes as the main component of their ground flora. On low lying glacial drift with deep soils the herb-rich communities dominate the woodland floor, but at higher altitudes, and where boulders form the substrate, there is a luxuriant growth of many moss species. McVean (1964) lists twenty-six species from a birchwood at Loch Stack of which twelve are bryophytes. McVean and Ratcliffe (1962) referring to the same general area record the presence of sixteen tree and herb species and thirty-one bryophyte species. Many of these birchwoods appear moribund, with an even age structure and little sign of regeneration.

Other tree species particularly alder and rowan occur as single species stands though only in small areas and infrequently. Alder woodland in an open moribund state occurs at Loch Choire and McVean and Ratcliffe

suggest this might be a relic of former climatic fluctuation.

Above the treeline and in places of extreme exposure sub-alpine scrub replaces woodland. In Sutherland juniper scrub is found on some islands in lochs as well as exposed situations. The juniper is normally dwarf Juniper, Juniperus communis ssp. nana, and is associated with lichens or bryophytes forming specialised communities at sites on Conamheall, Loch Eriboll, Foinaven and Arkle in the Reay Forest, and Farrmheall, Parphe. Mountain willow scrub is infrequent although the Salix myrsinites scrub

of Inchnadamph is worth special note, being restricted to limestone pavement. Salix aurita and S. atrocinerea are the common species occurring in isolated patches on rock ledges and are in many cases severely wind pruned, as by the road at Coldbackie.

Dwarf shrub heath is a widespread vegetation type in the county. In a map compiled for Beekeepers by Wittles (1950), 60–70 per cent of Sutherland is shown as areas of dwarf shrub heath and the dominant species of this heath is *Calluna vulgaris*. Much of the heath is anthropogenic in origin, a living monument to man's destructive powers. Dwarf shrubs are usually characteristic of the low alpine zone, but with the retreat of the tree line in Sutherland they have spread to cover large areas.

The dry heather moor centred upon the central highlands of Scotland and dominated by Calluna vulgaris is not extensive in Sutherland. It is found only in the south and east of the county to any great degree and occurs in the north and west only on particularly well drained soils. At low altitudes Erica cinerea, Empetrum nigrum and Arctostaphylos uva-ursi are species commonly associated with Calluna; at high altitudes Vaccinium spp, Empetrum hermaphroditum and Arctous alpinus form associations. In addition at high altitudes Calluna vulgaris becomes dwarfed forming a dense mat of prostrate plants only a few inches in height. In central Scotland this peculiar heath form occurs at elevations above 3000 ft whereas in Sutherland it is found in the Reay Forest at the 1000 ft contour and in the extreme north of Caithness, Dunnet Head, as little as 300 ft above sea level. In general a line drawn south from Whiten Head marks the distributional limits of the lichen-rich dwarf heaths to the east and the Rhacomitrium-rich dwarf heaths to the west. In many areas throughout the north Arctous alpinus and Calluna form an association rich in species.

One dwarf shrub heath of particular interest in Sutherland is the Dryas heath. Although rare and fragmentary in Scotland, Sutherland has some of the finest Dryas heath in Britain. This heath is quite different to those mentioned previously in two important respects. Firstly, Dryas heaths are extremely rich in species; McVean and Ratcliffe (1962) report 215 different species from twenty lists made on Dryas heaths. Secondly, Dryas is found in areas where the calcium content of the soil is high. Whereas most of the Calluna heaths have soil pHs down to 3.5, Dryas heaths are alkaline and have free calcium carbonate in the soil. This situation results from the Durness limestone in the west and from calcareous shell sands along the coast of Sutherland. In Sutherland this heath occurs from sealevel at Invernaver, Bettyhill, to 1700 ft in the foothills of Ben More Assynt; further south in Scotland it reaches 3000 ft in Glen Clova. It is clear that the communities associated with Dryas in the north are quite different from those further south. Using data in addition to those of McVean and Ratcliffe (1962), these Dryas communities can be divided into three distinct types (Kenworthy, 1969); a Dryas-Carex flacca nodum

occurs at low elevations below 300 ft, a *Dryas-Carex rupestris* nodum over a range from 200–2500 ft and a *Dryas-Salix reticulata* nodum at the highest altitudes. Although the *Dryas* communities at Invernaver are very variable and have co-dominants ranging from the dwarf shrubs *Salix repens* and *Empetrum nigrum* to bracken their association of species separates them from the other *Dryas* heaths. It would appear that this association of species dominated by *Dryas* is a unique vegetation unit dependent upon its coastal and altitudinal affinities.

Although Calluna vulgaris is a recurring species in the dwarf shrub heaths of Sutherland it is also a constant feature of many vegetation types which may be classified as wet heaths or blanket bog. Dwarf shrub heaths merge into blanket bogs wherever there is restricted drainage or a water table permanently close to the surface, and this applies to a large part of the area dominated by Calluna. Up to an altitude of 1500 ft Trichophorum-Eriophorum bog is predominant forming a typical 'hummock and hollow' type vegetation in which Sphagnum spp. play an important part in the process of peat accumulation. In these wetter areas Erica tetralix replaces Erica cinerea. Many insectivorous plants, such as Drosera anglica, Pinguicula vulgaris, P. lusitanica and Utricularia minor are found. Above 1500 ft Calluna-Eriophorum bog dominates the landscape and in many cases, north and south of Ben Loyal, by Crask Inn and at Strathy Bog, contains appreciable amounts of Betula nana. Also common are Arctous alpinus and Rubus chamaemorus. Where soils are shallow Trichophorum-Calluna bog is found, especially on ground with slopes over 10°. This vegetation type is species-poor and occurs in the western region, containing a higher proportion of lichens than previous types. There are more subtle variations upon this theme of vegetation based upon stagnant water which are not mentioned here but it is worth pointing out that these vegetation types depend almost entirely upon nutrition from rain water. Where bogs have been affected by fire drying out may take place and lead to the spread of Rhacomitrium. McVean and Ratcliffe (1962) point to an excellent example on the south-east end of Loch Meadie.

Soligenous mires are variants of the wetter moorland types but are grouped together on the criteria of lateral water movement through the soil, tending, in many cases, to give a richer soil and a larger number of species. They are to be found on the lower slopes of hills where lateral drainage is good. Molinia caerulea, Myrica gale and Carex spp. all form mire type vegetation together with Trichophorum, Eriophorum and Calluna. Closely associated with mires are springs and flushes, sites where there is a strong water flow, sufficient to prevent the development of closed vegetation. The moss Cratoneuron commutatum is a distinctive feature of flushes which are calcareous. Large patches of this rusty-golden moss often associated with Saxifraga aizoides can be seen from a distance against the surrounding moorland. Examples occur on the south side of Coldbackie Hill resulting from drainage water from the rich conglomerates. Saxifraga

aizoides also occurs in calcareous flushes with Carex spp. particularly Carex panicea and C. demissa in many parts of Sutherland; Ben Stack, Glendhu, Kylesku, and on the calcareous sands at Bettyhill. In contrast acid flushes give rise to species poor vegetation dominated by Narthecium ossifragum, Sphagnum spp. and the mosses Philonotis fontana and Pohlia gracilis.

Grassland is not extensive in Sutherland except where vegetation has been intensively grazed in the south-east, the west and northern coastal fringe and along the west of the Moine Thrust. In a general sense there are three major types of which the first Agrostis-Festuca grassland, the most widespread, is confined to lower altitudes. This ranges from species-rich communities on soils of high base status to species-poor communities on soils of low base status. The richer types include many herbs and other grasses such as Anthoxanthum odoratum, while at the acidic end of the range the grass Nardus stricta and fewer herbs occur. At high altitudes the Agrostis-Festuca grassland gives way to species-poor grassland dominated by mat grass Nardus stricta which occurs on soils of pH 4·2-5·5. Under wetter conditions Deschampsia caespitosa becomes the dominant grass. Included in this section are montane grass heaths usually found at the highest altitudes, unaffected by the influence of man. In Sutherland these communities are found on the highest hills and are characteristically grass and moss mixtures, or sedges and moss. For example, a widespread type is Nardus-Rhacomitrium on areas with a long snow lie, generally associated with Vaccinium myrtillus, Carex bigelowii and the lichens Cetraria islandica and Cladonia uncialis. Of those montane grass heaths based upon the presence of Juncus trifidus, the Juncus trifidus - Festuca ovina type occupies much of exposed sites on mountains. The summit plateau of Ben Hope has a good example of this vegetation in which Salix herbacea and Alchemilla alpina are constants.

The two remaining units of vegetation are the herb and fern meadow and moss heaths, the latter being only slightly different from the montane grass heaths mentioned previously. Natural herb meadow is rare in Sutherland since grazing is so extensive, but it is recorded from Ben More Assynt and Meall Horn. Of a wide variety of herbs associated with this vegetation Luzula sylvatica, Angelica sylvestris, Geum rivale and Sedum rosea are constant components of the community. This vegetation is found on steep slopes where access to grazing animals is restricted. A dwarf herb meadow is to be found on Ben More Assynt dominated by Alchemilla alpina and Sibbaldia procumbens and containing Silene acaulis, Thymus drucei and Polytrichum alpinum.

In addition to the major vegetation types described by McVean and Ratcliffe maritime and submaritime communities are found along the coasts of Sutherland. These plant communities have been described in some detail by Gimingham (1964). Sutherland has a very extensive coastline including cliffs, shingle, sandy foreshores, dunes and saltmarsh. In these habitats sodium chloride from seawater or salt spray has a dominating

effect upon the vegetation, except in certain dune systems where calcium carbonate from shell sand seems to be an overriding feature of the environment. Exposed cliffs harbour a large variety of lichens and dense swards of Plantago maritima or Armeria maritima. Also Tripleurospermum maritimum and Liquisticum scoticum are prominent species along the cliffs. On the cliff tops a grassland dominated by Festuca rubra is found sometimes associated with Salix repens, Empetrum nigrum or other prostrate shrubs where soil conditions are a little more acid. Many cliffs in northern Sutherland have both Primula scotica and Scilla verna as components of their vegetation. Where colonies of birds disturb the cliff top vegetation the area may be invaded by ruderal species. Shingle beaches are not extensive in Sutherland; Mertensia maritima being a most spectacular species associated with such areas. Foreshore plants seldom if ever occur in densities sufficient to produce a closed community, especially on the northern exposed beaches where communities containing Salsola kali, Cakile maritima, Atriplex hastata and other Atriplex spp. are reduced to a single representative, Honkenya peploides as on exposed beaches at Bettvhill.

Sand dunes are perhaps the most obvious feature of coastal vegetation. Due to their continuous state of flux they represent a range of habitats too large to be discussed here. However, the 'species richness' of a sand dune system depends to a large extent upon the chemical composition of the underlying sand. Sand derived from shell fragments has two effects. This more alkaline sand allows invasion by a wider spectrum of species and secondly the influence of such sand spreads further inland giving a greater area for colonisation. Whatever the nutrient status of the sand, Marram grass, Ammophila arenaria, is the dominant species in the first phases of dune formation giving rise to dune pasture and/or dune heath of some description. Due to high winds in this area most of the dune systems are in a clearly dynamic state. There are few good salt marshes in Sutherland. They are found as isolated patches at the head of the Kyles or sea lochs. Characteristic species are Armeria maritima, Glaux maritima, Puccinellia maritima and Plantago maritima: Cochlearia officinalis occurs sporadically but is important in many communities.

# Notes on the Fungal Flora of Sutherland

by Roy Watling, Royal Botanic Gardens, Edinburgh

The fungal flora of Sutherland is poorly known, there being few published records (see Mycologia scotica, Rev. J. Stevenson, 1879) until Dennis reported on the larger fungi of the north-west Highlands of Scotland (Kew Bulletin, 1955). Dennis' paper compiles his records from Tongue and adjacent areas and with a few collections made by Henderson in the south-west corner of the county; little more was added until recently when collecting and recording has been extended along the line Cape Wrath/Duncansby Head by Watling. Sutherland is of considerable interest to the mycologist for within its boundaries one can study the fungi of northern examples of British Highland birchwood and herbaceous communities on acidic and limestone outcrops. Bettyhill is an extremely fine centre for the study of the higher fungi, particularly with its close proximity to the Strathnaver area.

The list of fungi recorded for Sutherland is in some ways little different from that of areas further south, mainly because it includes a large number of species which have been recorded by virtue of their association with the numerous plantings of 'alien' trees. It is the details of the species list and their interpretation which are of the greatest interest. However, the introduced fungal flora can indicate trends and in some cases is of particular merit. Thus Borgie forest although being a fairly mature forest is of known and comparatively recent age and therefore most if not all the members of the rich fungal flora (over 100 species can be collected within the space of a 2 hour period) have colonised since that date. The woods about Tongue House and similar established properties have even richer floras reflecting

the diversity of substrata available for colonisation.

In contrast the moorlands offer very little, the dominant species being Omphalina ericetorum; the active Sphagnum areas, however, are colonised by a rather specialised and characteristic group of about a dozen species of agaric, the three most common being Galerina paludosa, G. sphagnorum and Hypholoma elongatum. The moorlands, where dissected by small wooded gulleys, are enriched by agarics suspected as mycorrhizal with the birches, e.g. Russula spp. The formerly much wider distribution of this woodland is indicated by the occurrence of agaries such as Nolanea cetrata and Galerina spp. on the slopes of Ben Loyal and neighbouring highlands. On the summits Omphalina luteovitellina has been recorded, a typical mountain fungus associated with the lichen Botrydina vulgaris.

The coastal sand-dunes offer a whole range of very characteristic species

including Conocybe dunensis (dune brown cone-cap), Psathyrella ammophila (dune brittle-cap) and Hygrophorus conicoides. Less common species have also been collected associated with the organic crusts and Collema spp. found amongst the Ammophila plants. Undoubtedly in certain areas of the dunes as in other communities mammal dung modifies the fungal flora, i.e. colonisation by Stropharia semiglobata, Panaeolus semiovatus, etc. The coastal grasslands particularly on fixed sand are characterised by several edible species of Agaricus including species clearly related to both the field and horse mushrooms and by the equally edible large puff balls, e.g. Calvatia utriformis.

Where the latter grasslands extend to the cliff tops Salix repens invades the turf and although parallel communities are found in many other areas those in Sutherland are particularly rich. These communities within easy reach of Bettyhill, particularly Farr Bay, have been intensively collected over several weeks for several seasons. They are typified by Russula spp. (R. persicina, R. fragilis) and Lactarius spp. (L. lacunarum, L. hysginus) Leccinum salicola, Cortinarius pseudosalor agg., Amanita spp. (A. rubescens, undescribed species) etc. a mycorrhizal group of larger fungi and a probably saprophytic group including Cantharellus cibarius, a phenomenon just as one experiences in a 'normal' woodland. Grassland fungi are also intermixed in the community, e.g. Marasmius oreades (fairy ring cham-

pignon), Calocybe carnea and Entoloma madidum.

Undoubtedly the most interesting communities of all in Sutherland are those in the Strathnaver reserve. With its vast assemblage of flowering plants, a parallel and equally unique assemblage of higher fungi is found. Boletus luridus is a constant member of the Dryas/Salix repens nodum whereas it normally is associated elsewhere in Britain with oak woodland on base rich soils. The genera Hebeloma and Inocybe are represented by a vast assemblage of species, many of which have still to be determined because of the complexities of taxonomy; however, they are an important integral part of the flora. Even where only a few remaining plants exist the former presence of birch wood on the northern parts of the reserve is reflected by the sudden appearance in the area of woodland fungi, e.g. Lactarius torminosus. The Salix repens communities at Bettyhill are under careful observation by Watling and are being compared with similar communities at Kindrogan, Perthshire, and on Hirta in the St Kilda group. Very close parallelisms have been demonstrated and it is hoped this work will be published in the near future.

The grassland communities are frequently on acidic substrates and are fairly heavily grazed. Under these conditions the *Hygrophoraceae* play a less important part among the fruiting flora than in base-rich grasslands and are replaced by *Rhodocybe popinalis*, *Entoloma prunuloides* and *E. radiatum* and *Lycoperdon foetidum* (puff ball). In areas of high activity of sea birds the fungal flora is very depauperate resembling in constituents

the area adjacent to zooplethismic grasslands on St Kilda.

#### The Influence of Man in Sutherland

The more one examines evidence from Sutherland the more it becomes apparent that Fraser Darling and Morton Boyd in Natural History of the Highlands and Islands (1964) are wrong in their assertion that 'it is possible that such areas as West Sutherland and the North West corner of Ross-shire did not know man until two or three thousand years ago'. If we accept the evidence of Callander, Cree and Ritchie (1927) that the bone caves at Allt nan Uamh had human occupants prior to the final valley glaciation it is evident that man was in this area eight to ten thousand years ago. Bones of Arctic animals were found, split for the extraction of marrow, sawn antlers of reindeer, stones burned by a fire and charcoal. No traces of domestic animals were found and it appears that man's first excursion into Sutherland was as Neolithic man, the hunter.

With an improving climate there is evidence of domesticated animals in the Neolithic chambered cairn at Embo excavated in 1960 (Henshall, 1965) where the bones of pig, sheep and small ox were found. This invasion by Mediterranean man brought with it from the 'golden crescent' of Europe cultivated crops and a more permanent culture. Several factors influenced the settlement pattern in the area. Firstly, accessibility is important and even a cursory examination shows the settlement patterns of many ages to stem largely from the coast following the sheltered straths, with their glacial soils, or to be confined to areas with an adequately amenable geology, for example, sandstones and limestones, which are easily weathered.

Little is known of these stone age peoples who buried their dead in chambered cairns. Most cairns have been pillaged in the past and little evidence of the culture remains. Neolithic peoples were gradually replaced by 'Beaker People' who buried their dead in short 'cists' or stone coffins. These coffins contained a food vessel or beaker in which have been found early cultivars. Hut circles, the remains of dwellings, seem to be the home of such people and of later bronze age settlers. That changes in the vegetation of Sutherland occurred during this period is evident from pollen analysis of deep peats and the remains of plants and animals associated with chambered cairns. Both the stumps of pine found in peat and bones of capercallie associated with cairns indicate extensive coniferous forests. Removal of the forest is evident from charcoal remains of conifers, hazel and birch together with small amounts of grain suggesting a primitive cultivation of cleared ground.

Very little is known of the bronze age peoples and their effects upon

vegetation in Sutherland. It is known that these peoples who lived in an age of standing stones and circles did have at least one distinction, they cremated their dead and this at least suggests that they had some reverence for fire and that they used it extensively. Thus the process of removal of woodland may have continued in this period although there is little evidence to suggest that in Sutherland the bronze age culture was more extensive in its influence than previous cultures. It is also apparent that the tools of the early Neolithic peoples were quite effective in clearing woodland, as demonstrated in modern times in Denmark. There three men cleared 600 square yards of silver birch forest in 4 hours with an authentic axe head which had not been sharpened for four thousand years, demonstrating the potential influence of early man on forests.

Approximately 400 B.C. marks the beginning of the iron age. Lasting for some 500 years, this period includes the appearance of hill forts and the less explicit brochs. The latter, round double-walled towers up to 40 ft in height were places of refuge but there still remains much speculation about these structures. 67 brochs are listed for Sutherland but others, how many no one can guess, must have been destroyed with the passage of time. These people, the 'Caereni' of Ptolemy's map, were recognised by the Romans as a pastoral race and such observations are borne out by the presence of ox, sheep, goat and pig bones found associated with the remains of this civilisation. There is also evidence at this time of large herds of red deer. Iron used by these people required smelting and in turn required the destruction of forest, especially oak and birch. Heaps of slag indicating sites of early iron workings have been found in the immediate vicinity of two brochs at Shinness, Lairg.

Thus industry, albeit on a small scale, introduced a new factor in the destruction of forest. By this time the climate had changed to such an extent that the forests of Britain were in decline and in most parts of Sutherland removal of trees would be rapidly followed by the encroachment of moorland. Man was using a resource which would not replace itself. The scale of such impact is difficult to judge since, unlike other parts of Britain, the written history of Sutherland is particularly sparse until the seventeenth century. An inventory of ancient monuments (H.M.S.O., 1910) lists: a heap of iron slag 30 ft across and 4 ft in height near Achinduich, Lairg; heaps of slag at Kinbrace, Loch Shin; and iron slag, burnt wood plus charcoal 24 in. thick at Skelpick, Bettyhill. Timothy Pont's map of Strath Navernia (1633) has the legend 'Heir is yron oare' on the west of Strathnaver and at the south end of Ben Stumanadh. 'Loch Isyre or ye wrights loch' refers on this map to Loch Syre. Gordon (1812) in a work written in 1630 makes reference to the inhabitants of Sutherland who 'made' iron from iron ore. Sinclair, in the first Statistical Account (1793), states of Assynt that 'Iron mines were dug here of old . . . in different places in this parish'. He also suggests that this was before the Scandinavian invasions (c. A.D. 850). The hill above Kirkton Farm, Golspie, is also referred to as the 'Iron Hill'. Thus from Assynt, to Strathnaver, to the east coast there is evidence of early iron workings and the destruction of forests.

Later wood was used in kilns in the production of limestone. In the west, particularly Assynt, there is documented evidence of tree felling for this purpose whereas further east where trees by this time were scarce peat was used in the kilns as at Strathy. Corn drying kilns are to be found in many of the pre-clearance villages and good examples are still to be found at Gruain Mor, Loch Naver and Rossal, Strathnaver. It is not clear whether peat or timber was used in those kilns but presumably where timber was available it was used. However, it can be assumed that over the past two thousand years timber of any size was becoming difficult to obtain. There is little evidence from peat profiles of pine in this period and roof timbers of 'bog oak' (pine) were highly sought after by the preclearance peoples in many parts of Sutherland. Apparently timbers lying in the peat could be recognised on frosty mornings by the differential frost patterns they formed.

So far emphasis has been put upon man's increasing activity in destroying woodland and the parallel deteriorating climate. But man's secondary effect is associated with his pastoral and agricultural activities. The latter were very much limited to the immediate surroundings of the village and can be seen in the excellent examples of lazy beds at Rossal and other preclearance villages. Grazing animals, especially sheep, goats and deer are known to suppress the regeneration of natural forest and any extension of their numbers by pastoral activities will cause a decrease in tree cover in the area. The first threat of destruction to forests was from Neolithic peoples who turned from hunting to domestication of grazing animals. There has been a general pattern of change throughout Europe which was undoubtedly followed in Sutherland. Closed forest with deer and swine gave rise to an open forest with fewer swine, and deer and cattle increase. This finally led to the virtual absence of trees and a predominance of sheep, goats and to a lesser extent, cattle.

While the grazing associated with pre-clearance villages was undoubtedly of some considerable extent it did include a variety of grazing animals, deer, cattle, 'kerry' sheep, goats and horses. Sinclair (1793) noted that in Rogart 'Some wretched vestiges of very considerable birchwoods are to be seen in different parts; but the shoots from such of the old stocks as have not decayed are annually cropped by cattle in the autumn and winter; and such shoots as may survive to a second summer are sure to be cut by the people to bind their cattle'. So the 'Caereni' or pre-clearance peoples for thousands of years would have had some adverse effects upon birch regeneration.

John Prebble in *The Highland Clearances* (1963) tells the fascinating story of the change in land management throughout Sutherland in early years of the eighteen hundreds and its disastrous sociological effects.

Whereas previously 'kerry' sheep and cattle were kept for a local market the introduction of the long faced voracious Cheviot sheep meant an export of mutton and wool to the south. Land which produced 2d. per acre under cattle now produced twelve times that amount under sheep. Over a period of 50 years the number of sheep in Sutherland built up to about 200,000 in 1857, remaining at approximately the same figure subsequently. Thus the effect of sheep over the past 100 years has been a predominant one.

That sheep farming has affected vegetation is clear from several points of view. These hardy sheep graze on the wet moorlands which cover a large part of Sutherland and in order to maintain new growth the areas are burnt. Fire reduces the possibility of natural tree regeneration. Where fire and sheep are absent as on islands in lochs (Cam Loch, Ledmore, Loch Beannach, Assynt, Loch Meadie and Loch Syre are good examples) rowan, birch and in some places oak and pine are present. This is also true of steep rock faces. In addition Pennie (1966) examined the age structure of birch woods in Strath Carnaig, which became part of the Torboll farm grazings in 1812. These birch woods are ageing, with no regeneration. The trees are no younger than 40 years and most are 80 to more than 110 years old. Grazing clearly causes a suppression of tree regeneration. He also quotes the effects of sheep fencing on the shores of Loch Choire where natural regeneration has occurred within the fenced areas.

Clearly man has influenced the vegetation of Sutherland both directly and indirectly over a period of perhaps 5000 years. Apart from the planting in the eighteenth century the present day plantings by the Forestry Commission are the first signs of man's attempts to replace some of the tree cover he has helped to remove.

## Bibliography

- ADAM, R. J. 1960 John Home's Survey of Assynt Edinburgh Scottish History Society ANDERSON, G. & P. 1834 Guide to the Highlands and Islands of Scotland
- ANTHONY, J. 1959 Contribution to the Flora of Sutherland Trans. Bot. Soc. Edinb. 38, 7
- BALFOUR, I. B. 1907 A Catalogue of British Plants in Dr. Hope's Hortus Siccus, 1768 Notes Roy. Bot. Gard. Edinb. 4, 147
- BALFOUR, J. H. 1865 Presidential Address Trans. Bot. Soc. Edinb. 8, 216
- BENNETT, A. 1882 Notes on the Flora of Caithness and Sutherland J. Bot. Lond. 20, 114
- BENNETT, A. 1889 Records of the Scottish Plants Trans. Bot. Soc. Edinb. 17, 417 BENNETT, A. 1873 Contribution to the Flora of East Sutherland Ann. Scot. Nat. Hist. 225
- BENNETT, A. 1894 Linnaea borealis in E. Sutherland Ann. Scot. Nat. Hist. Soc. 249
- BENNETT, A. 1894 Contribution to the Flora of East Sutherland Ann. Scot. Nat. Hist. 25
- BENNETT, A. 1905 Supplement to Topographical Botany J. Bot. Lond. 43
- BENNETT, A., SALMON, C. E. & MATTHEWS, J. R. 1929-30 Second Supplement to Topographical Botany J. Bot. Lond. 67 and 68
- BIRSE, E. L. & DRY, F. T. 1970 Assessment of climatic conditions in Scotland. 1.

  Based on Accumulated Temperature and Potential Water Deficit Macaulay Institute,
  Soil Survey of Scotland
- BIRSE, E. L. & DRY, F. T. 1970 Assessment of climatic conditions in Scotland. 2.

  Based on Exposure and Accumulated Frost
- BLAKE, E. A. 1957 Plant Distribution and Communities on Foinne Bheinn (Sutherland) Trans. Bot. Soc. Edinb. 37, 130
- BOTFIELD, B. 1830 Journal of a Tour Through the Highlands of Scotland in 1829
- BROOKS, B. S. 1964 The Flora of Handa Island Proc. B.S.B.I. 5, 314
- BRYCE, I. B. D. 1972 A report on the antiquities of Bettyhill Unpublished report
- BURNETT, J. M. (ed) 1964 The Vegetation of Scotland Edinburgh
- CALLANDER, J. G., CREE, J. E. & RITCHIE, J. 1927 Preliminary report on caves containing palaeolithic relics near Inchnadamph, Sutherland Proc. Soc. Antiq. Scot. 61, 169
- CAMPBELL, H. R. 1920 Caithness and Sutherland County Geography, Cambridge CLAPHAM, A. R., TUTIN, T. G. & WARBURG, E. F. 1962 Flora of the British Isles Cambridge
- CRAIG, W. 1889 Excusion of the Scottish Alpine Botanical Club to Sutherland Trans. Bot. Soc. Edinb. 17, 372
- CRAMPTON, C. B. & MACGREGOR, M. 1912 Note on the Calluna-Mat Association of the Mountain Tops of the Northern Highlands (Ben Armine) Scot. Bot. Rev. I 182
- CRAMPTON, C. B. & MACGREGOR, M. 1913 The Plant Ecology of Ben Armine Scot. Geog. Mag. 29, 169 and 256
- CRAMPTON, C. B. & MACGREGOR, M. 1913 Note on the Calluna-Mat Association of the Mountain Tops of the Northern Highlands (Ben Armine) Rev. J. Ecol. I, 219 DANDY, J. E. 1958 List of British Vascular Plants London

- DARLING, F. F. & BOYD, J. M. 1964 The Highlands and Islands New Naturalist 6, London
- DONY, J. G., PERRING, F. & ROB, C. M. 1974 English Names of Wild Flowers Butterworths, London
- DRUCE, G. C. 1895 Notes on the Flora of Elphin Ann. Scot. Nat. Hist. 35
- DRUCE, G. C. 1903 Plants of East Sutherland Ann. Scot. Nat. Hist. 37, 122 and 286
- DRUCE, G. C. 1908 Plants of West Sutherland Ann. Scot. Nat. Hist. 39, 106 and 259
- DRUCE, G. C. 1932 Comital Flora of the British Isles Arbroath
- DURNO, S. E. 1958 Pollen Analysis of Peat Deposits in Eastern Sutherland Scot. Geog. Mag. 74, 127
- DURNO, S. E. 1958 Occurrence of Pollen of Fraxinus in Northern Scottish Peats Trans. Bot. Soc. Edinb. 37, 220
- FERRIERA, R. E. C. 1957 Salix reticulata L. in West Sutherland Trans. Bot. Soc. Edinb. 37, 132
- FERRIERA, R. E. C. 1958 Equisetum hyemale L. in West Sutherland Trans. Bot. Soc. Edinb. 37, 220
- FERRIERA, R. E. C. 1959 Scottish Mountain Vegetation in Relation to Geology Trans. Bot. Soc. Edinb. 37, 229
- FLEMING, J. 1823 Gleanings of Natural History on the Coast of Scotland Edinb. New Phil. Journ. 9, 248
- FOX, H. E. & HANBURY, P. J. 1885 Botanical Notes of a Tour in Caithness and Sutherland J. Bot. Lond. 23, 333
- FOX, H. E. & HANBURY, F. J. 1886 Caithness and Sutherland Plants J. Bot. Lond. 24, 344
- FRASER, F. S. 1870 Osmunda regalis L. on Loch-na-Caillach, Lairg Trans. Bot. Soc. Edinb. 10, 460
- GILMOUR, J. & WALTERS, M. 1955 Wild Flowers New Naturalist 5, London
- GIMINGHAM, C. H. & CORMACK, E. 1964 Plant Distribution and Growth in Relation to Aspect on Hill Slopes in North Scotland Trans. Bot. Soc. Edinb. 39, 525-38
- GORDON, N. J. 1963 Invernaver National Nature Reserve, Sutherland Management Plan Report of Nature Conservancy
- GORDON, R. 1812 A Genealogical History of the Earldom of Sutherland from its Origin to the Year 1630 Edinburgh
- GRAHAM, R. 1826 Rare Scottish Plants Edin. New Phil. Journ. 14, 179
- GRAHAM, R. 1827 Botanical Excursion to Sutherland Edin. New Phil. Journ. 4, 193
   GRAHAM, R. 1833 Notice of Botanical Excursion into the Highlands of Scotland
   Edin. New Phil. Journ. 15, 358
- GRAHAM, R. 1845 Durness Parish Flora New Stat. Acct. Scot. 15, 90
- GRAY, A. & HINXMAN, L. W. 1888 A List of Plants Observed in West Sutherland Trans. Bot. Soc. Edinb. 17, 220
- GRAY, A. 1887 Arenaria norvegica Gunn. in Sutherland Scot. Nat. 3, 93
- GREEN, P. S. 1955 Pollen Grain Size in Nasturtium Trans. Bot. Soc. Edinb. 36, 289
- HANBURY, F. J. 1886 Botany of Caithness and Sutherland J. Bot. Lond. 24, 148
- HANBURY, F. J. 1886 Plants, West Sutherland and Caithness J. Bot. Lond. 24, 343
- HANBURY, F. J. & MARSHALL, E. S. 1887 Notes on some Plants in North Scotland J. Bot. Lond. 25, 125
- HANBURY, F. J. & MELVILL, J. C. 1889 Records of Sutherland Plants J. Bot. Lond. 27, 107
- HARRISON, J. W. H. & HARRISON, H. H. 1938 The Flora of the Island of Handa Proc. Univ. Durham Phil. Soc. 10, 1
- HEDGE, I, 1960 Excursion to Sutherland Proc. B.S.B.I. 3, 458
- HENDERSON, J. 1812 Agriculture in Sutherland London
- HENSHALL, A. S. 1965 The Excavation of a Chambered Cairn at Embo, Sutherland Proc. Soc. Antiq. Scot. 96, 9

H.M.S.O. 1911 Second Report and Inventory of Monuments and Constructions in the County of Sutherland Edinburgh

HOOKER, W. J. 1821 Flora Scotica

HUBBARD, C. E. 1954 Grasses Penguin Books

INCHNADAMPH 1957 Inchnadamph Nature Reserve Report Nature Conservancy 47

KEEGAN, P. Q. 1889 In Sutherland Science Gossip 25, 205

KEEGAN, P. Q. 1890 The Botany of Sutherland Science Gossip 26, 116

KENWORTHY, J. B. 1969 Unpublished data

KENWORTHY, J. B. 1972 The Wyllie-Fenton Field Centre, Bettyhill Unpublished Handbook. Dept. of Botany, University of Aberdeen

KENWORTHY, J. B., ASTON, D. & BUCKNALL, S. A. 1972 A study of hybrids between Betula pubescens Ehrh and Betula nana L. from Sutherland – an integrated approach Trans. Bot. Soc. Edinb. 42, 517

LIGHTFOOT, J. 1777 Flora Scotica London

LINTON, J. B. 1886 New Records (Carex pauciflora, Ben Hope) J. Bot. Lond. 24, 377 LINTON, E. F. & W. R. 1889 Records of Sutherland Plants J. Bot. Lond. 27, 207

LOCH, J. 1843 Plantations on the Sutherland Estates Trans. High. & Agr. Soc. Scot., 3rd Ser. 1, 36

MACDONALD, J. 1880 Agriculture in the County of Sutherland Trans. High. Agr. Soc. Scot. 12, 1

MACKENZIE, H. M. 1845 Tongue Parish Flora New Stat. Acet. Scot. 15, 172

MCVEAN, D. N. & BERRIE, A. 1952 Hermaphrodite Empetrum in Sutherland Scot. Nat. 64, 45

MCVEAN, D. N. 1958 Ecology of Alnus glutinosa (L.) Gaertn J. Ecol. 44, 321

MCVEAN, D. N. 1958 Island Vegetation of some West Highland Freshwater Lakes Trans. Bot. Soc. Edinb. 37, 200

MCVEAN, D. N. & RATCLIFFE, D. A. 1962 Plant Communities of the Scottish Highlands H.M.S.O. London

MCVEAN, D. N. 1964 Dwarf Shrub Heaths, p. 481. In, The Vegetation of Scotland Ed. Burnett. Edinburgh

MARSHALL, E. S. 1888 Notes on Highland Plants J. Bot. Lond. 26, 149

MARSHALL, E. S. 1899 Epipactis atropurpurea (as atrorubens) J. Bot. Lond. 27, 328 MARSHALL, E. S. & HANBURY, F. J. 1891 Notes on Highland Plants J. Bot. Lond. 29, 108

MARSHALL, E. S. & SHOOLBRED, W. A. 1897 Carex chordorrhiza L. f. J. Bot. Lond. 35, 450

MARSHALL, E. S. & SHOOLBRED, W. A. 1898 Notes on a Tour in North Scotland J. Bot. Lond. 36, 166

MARSHALL, E. S. 1901 Plants of North Scotland J. Bot. Lond. 39, 266

MARSHALL, E. S. & SHOOLBRED, W. A. 1909 Some Sutherland Plants J. Bot. Lond. 47, 220

MARSHALL, E. S. 1910 Epipactis helleborine var. purpurea Celak (as Helleborine atroviridia) in W. Sutherland Ann. Scot. Nat. Hist. Soc. 123

MARSHALL, E. S. 1910 Callitriche intermedia var. tenufolia (Pers.) J. Bot. Lond. 48, 111

MARSHALL, E. S. 1916 Plants of West Sutherland J. Bot. Lond. 54, 169

MARSHALL, J. B. 1894 Betula intermedia Thomas, in W. Sutherland J. Bot. Lond. 23, 78

MATTHEWS, J. R. 1955 Origin and Distribution of the British Flora London

MILLER, W. F. 1890 New Records for Sutherland J. Bot. Lond. 28, 24

MURRAY, A. 1836 The Northern Flora Edinburgh

PEARSALL, W. H. 1956 Two Blanket Bogs in Sutherland J. Ecol. 44, 493

PENNANT, T. 1774 A Tour in Scotland Chester

PENNIE, I. D. 1967 The Influence of Man on the Vegetation of Sutherland M.Sc. report. Dept. of Botany, University of Aberdeen

PHEMISTER, J. 1948 Scotland, The Northern Highlands H.M.S.O. Geological Survey Edinburgh

PERRING, F. H. & WALTERS, S. M. 1962 Atlas of the British Flora London and Edinburgh

PREBBLE, J. 1963 The Highland Clearances London

PRITCHARD, N. M. 1960 Studies in Gentianella amarella (L.) Bor Wats. 4, 218

PUGSLEY, H. W. 1948 A Prodromus of British Hieracia J. Linn. Soc. 54

RATCLIFFE, D. A. 1958 Saxifraga nivalis L. in West Sutherland Trans. Bot. Soc. Edinb. 37, 220

RATCLIFFE, D. A. 1960 Montane Plants in Ross-shire and Sutherland Trans. Bot. Soc. Edinb. 39, 107

RATCLIFFE, D. A. 1962 Potentilla rupestris L. in Sutherland Proc. B.S.B.I. 4, 501

RAVEN, J. E. 1952 Agropyron doniana (F. B. White) Meld Wats. 2, 180

RAVEN, N. E. & WALTERS, S. M. 1956 Mountain Flowers London ROBERTSON, J. 1768 Oxytropis halleri Bunge at Farr Scot. Mag. 30, 344

ROGERS, J. M. 1900 Handbook of British Rubi London

ROSS, D. 1845 Loth Parish Flora New Stat. Acet. Scot. 15, 196

SALMON, C. E. 1900 Plant Notes from Sutherland J. Bot. Lond. 38, 299

SALMON, C. E. 1915 Polygala oxyptera (as dubia) (Dornoch) J. Bot. Lond. 53, 279

SIMPSON, N. D. 1960 A Bibliographical Index of the British Flora

SINCLAIR, J. 1763 edn The Statistical Account of Scotland Edinburgh

STABLES, W. 1833 Lycopodium annotinum L. in Sutherland Phytol. 1, 147

STEVEN, H. M. & CARLISLE, A. 1950 The Native Pinewoods of Scotland Edinburgh TIMOTHY PONT'S MAP OF STRATH NAVERNIA 1633 Black's Atlas

TOWNSEND, F. 1904 Galium pumilum (as sylvestra) Sutherland J. Bot. Lond. 42, 240

TRAIL, J. W. H. 1873 Centaurea scabiosa etc. in Sutherland Scot. Nat. II, 175

W. 1857 A Peep at the Ferns of Sutherland Nat. 7, 8, 29, 77

WATSON, H. C. 1832 Plants seen at Golspie Kew Cat. 41

WATSON, H. C. 1833 Plants seen in North Scotland Kew Cat. 39

WATSON, H. C. 1937 New Botanist's Guide 2, 512

WATSON, H. C. 1883 Topographical Botany 2nd edn London

WATSON, W. C. R. 1958 Handbook of the Rubi of Great Britain and Ireland Cambridge

WEBSTER, M. McC & MARLER, P. 1952 Plants of the South Parphe Wats. 2, 163 WHITE, I. D. & MOTTERSHEAD, D. N. 1972 Past and Present Vegetation in Relation to Solifluction on Ben Arrkle, Sutherland Trans. Bot. Soc. Edinb. 41, 475-89

WILMOTT, A. J. & CAMPBELL, M. S. 1946 Autumn Botanising at Lochinver B.E.C. 16, 820

WITTLES, C. L. 1950 Heath areas in Scotland The Scottish Beekeeper, 26

WOLLEY-DOD, A. H. 1930-1 A revision of the British Roses J. Bot. Lond. 68 and 69

YOUNG, D. P. 1959 Erinus alpinus L. at Bettyhill Proc. B.S.B.I. 3, 337

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## County Flora

The sequence of genera and the nomenclature of the species are as in the List of British Vascular Plants (Dandy, 1958). The species name is followed by the vice-county number or numbers in which the species has been recorded. The common name follows that in the most recent publication on the subject English Names of Wild Flowers (Dony, Perring and Rob, 1974) a B.S.B.I. publication. Where an English common name is not common to Scotland the appropriate Scottish common name is given together with that recommended by the B.S.B.I. An obvious example is that of Harebell and Bluebell. All common names are to be found in Flora of the British Isles (Clapham, Tutin and Warburg, 1962). The next line gives the general habitat and the frequency of occurrence which is stated under:

FREQUENCY No. of 10 km squares in which species is recorded Very rare 1-2Rare 3-5Occasional 6-12Frequent 13-40Common 41-64

Common, widespread 65 and over

The distribution is indicated by mentioning the name of every district in which the species has been observed. The districts in the upper line are those in v.c. 107, those in the lower line of v.c. 108. As an example, when a species has been recorded from every district, its distribution is indicated thus:

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

When a species has not so far been recorded from a district, the name of that district is replaced by an ——, thus:

	 	DORNOCH		 	KILDONAN
ASSYNT			TONGUE		

No further details of distribution are given except in the case of species of restricted distribution. For these the localities in which they have been

observed are indicated along with the date and collector's name. In such genera as *Hieracium* and *Rubus* where there are a large number of species, each with a very limited distribution, only those districts with localities where that particular species has been recorded are mentioned, thus:

Hieracium anglicum Fries (107, 108)

Dornoch (Cambusmore)

Assynt (Knockan, Inchnadamph)

Casual and introduced species of limited distribution are treated likewise.

# PTERIDOPHYTA LYCOPODIACEAE Lycopodium L.

L. selago L. (107, 108) Fir Clubmoss On moors, heaths and rocky places on hills. Common in the north and west. Descends to sea level on the north coast. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR L. inundatum L. (108) Marsh Clubmoss In a bog. Very rare. ASSYNT -Assynt (Canisp, 1903, G.C.D.) No recent record L. annotinum L. (107) Interrupted Clubmoss Stony places on hills. Very rare. CREICH LAIRG ---Creich (Oykell Bridge, 1833, W.A.S.) Lairg (Ben Hee, 1960, I.H.) L. clavatum L. (107, 108) Stag's-horn or Common Clubmoss On moors and heaths. Frequent. LAIRG ROGART -KILDONAN ASSYNT DURNESS TONGUE L. alpinum L. (107, 108) Alpine Clubmoss On mountain moorlands. Frequent, mainly on western hills. CREICH LAIRG ROGART ---LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE SELAGINELLACEAE Selaginella Beauv. S. selaginoides (L.) Link. (107, 108) Lesser Clubmoss Damp mossy slopes and rock-ledges. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE ASSYNT EDDRACHILLIS DURNESS TONGUE

#### **ISOETACEAE**

Isoetes L.

I. lacustris L. (107, 108) Common Quillwort

In lochans. Occasional.  CREICH —— — — — — — — — — — — — — — — — — —	KILDONAN
I. echinospora Durieu (108) Spring Quillwort In lochans. Rare.	
ASSYNT — TONGUE FARR Assynt (Stoer, Ullapool) Tongue (Talmine, Modsarie) Farr (Syre)	
EQUISETACEAE Equisetum L.	
E. hyemale L. (107, 108) Rough Horsetail or Dutch Rush Wet places on hills. Very rare.	KILDONAN
ASSYNT — DURNESS — — — — — — — — — — — — — — — — — —	
E. variegatum Schleich ex Weber & Mohr (107, 108) Variegate Horsetail	d
Wet banks on hills. Very rare.	
Creich (Ben More Assynt, 1969, U.K.D.) Assynt (Inchnadamph, 1909, E.S.M.; Lochinver, 1944, A.J.W.)	
E. fluviatile L. (107, 108) Water Horsetail In lochs, ponds and ditches. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH	KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR	
E. palustre L. (107, 108) Marsh Horsetail In marshes and bogs. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH	KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR	THE OHAI
E. sylvaticum L. (107, 108) Wood Horsetail	

Wet wo	odlands, banks	and sandy p	laces. Fre	quent.		
CREICH		RT DORNOCH			LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	S DURNESS	TONGUE	FARR		
E. prate	nse Ehrh. (107	. 108) Shady	Horsetail			
	sy banks. Rare					
	LAIRG ROGA			CLYNE		
ASSYNT		DURNESS				
Lairg (	Lairg, 1857, W.	.)				
	Tressady, 1957		)			
	Brora, 1957, M	.McC.W.)				
	Drumbeg)	0 W O . TO TET 3 E .	a .			
Durness	(Ben Hope, 19	970, R.W.M.0	J.)			
E arven	se L. (107, 108	(A) Field Horse	etail			
	laces, fields, ro			nmon.		
CREICH	LAIRG ROGAL				LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
$\mathbf{E}. imes \mathbf{litor}$	ale Kühlew ex	Rupr. (107)				
Clyne ( I	Brora, M.McC.	W., 1957)				
TO 4.1	4-2- Til J. /105	7 100) C	TT 4 - 21			
	teia Ehrh. (107 banks of stream		norsetan			
muddy /	ROGAL			CLYNE		
	— ROGAI		TONGUE	CHINE		
Rogart (	Tressady, 1957	M.McC.W.				
	Brora, 1957, M.		,			
	(Borgie, 1959,					
v		ŕ				
0	SMUNDACE	AE				
0	smunda L.					
O vogali	s L. (107, 108)	Povel Form				
	laces in the no		Occasion	al		
	LAIRG					
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE			
Lairq (1	Loch na-Caillaci					
			,			
	YMENOPHY					
H	lymenophyllun	n Sm.				
H. wilso	nii Hook. (107	108) Wilson	's Filmy f	ern		
	ks and woods i					
CREICH						
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		

### **DENNSTAEDTIACEAE**

Pteridium Scop.

P. aquilinum (L.) Kühn (107, 108) Bracken
Woods, banks, heaths and moors. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

## ADIANTACEAE

Cryptogramma R. Br.

C. crispa (L.) R. Br. ex Hook (108) Parsley Fern Rocky places. Very rare.

FARR

Farr (Ben Klibreck, 1956, E.F.W.)

### BLECHNACEAE

Blechnum L.

B. spicant (L.) Roth (107, 108) Hard-fern
Woods, banks and rocky places on moors. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

## ASPLENIACEAE

Phyllitis Hill

**P.** scolopendrium (L.) Newm. (107, 108) Hart's-tongue Shady rock crevices. Occasional in the north and west, very rare in the east.

DORNOCH -

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR Dornoch (Cambusmore, 1962, A.McG.S.)

Asplenium L.

A. adiantum-nigrum L. (107, 108) Black Spleenwort
Rocky places, banks and walls. Frequent.

LAIRG —— GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

A. marinum L. (107, 108) Sea Spleenwort Sea-cliffs and caves on north and west coasts. Occasional. Extinct in east.

	EDDRACHILLIS Strathsteven, 1888			FARR		
	omanes L. (107, 10 evices and walls. 1				in the ea	ast.
CREICH ASSYNT	LAIRG ROGART EDDRACHILLIS	DORNOCH DURNESS		CLYNE FARR	LOTH	KILDONAN
A. viride	Huds. (107, 108)	Green Sp	leenwort			
On wet	basic rocks. Occas	sional.				
CREICH						
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
	muraria L. (107,					
Walls ar	nd basic rocks. Oc			and we	est, rare	in east.
		DORNOCH				
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
	THYRIACEAE thyrium Roth					
	femina (L.) Roth roods and banks.		Lady Fer	n		
CREICH	LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
	tre (Hoppe) Ryla n screes. Rare.	nds (107, 1	108) Alpin	e Lady	Fern	
	Ben More Assynt, en Klibreck, 1887		.M. & F			
C	ystopteris Bernh.					
	is (L.) Bernh. (10 cks and walls. Fr		ittle Bladd	ler-fern		
CREICH		DORNOCH			LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
	ASPIDIACEAE Oryopteris Adans.					

D. filix-mas (L.) Schott (107, 108) Male Fern

Woods and shady places. Common, widespread. LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR D. borreri Newm. (107, 108) Scaly or Golden-scaled Male Fern Damp shady places in woods and amongst rocks. Frequent. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE D. abbreviata (DC) Newm. (107, 108) Small Male Fern Rocky places on hills. Rare. CREICH ---ASSYNT EDDRACHILLIS FARR D. lanceolatocristata (Hoffm.) Alston (108) Narrow Buckler-fern Moist woodlands. Occasional. ASSYNT EDDRACHILLIS DURNESS TONGUE FARR D. dilatata (Hoffm.) A. Gray (107, 108) Broad Buckler-fern Shady places in woods and heaths. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR D. aemula (Ait.) Kuntze (108) Hay-scented Buckler-fern On rocks in Birchwoods, Very rare. EDDRACHILLIS DURNESS -Eddrachillis (Loch Stack, 1963, D.A.R.) Durness (Loch Eriboll, 1965, D.McC.) D. assimilis S. Walker (107, 108) On cliffs. Very rare. CREICH ----ASSYNT EDDRACHILLIS DURNESS ---Creich (Ben More Assynt, 1890, F.J.H., 1891, E.S.M.) Assynt (Achmelvich, 1955, J.A.)

Durness (Ben Hope, 1966, A.G.K.: Foinaven, 1967, A.G.K.: Carnstackie,

# Polystichum Roth

Eddrachillis (Ben Stack, 1967, A.G.K.)

1967, A.G.K.: Loch Eriboll, 1967, D.McC.)

P. aculeatum (L.) Roth (107, 108) Hard Shield-fern Shady places amongst rocks and in woods. Occasional.

ASSYNT	EDDRACHILLIS	DORNOCH DURNESS		FARR		KILDONAN
	itis (L.) Roth (10 in basic rocks. O		on limestor	ne rocks. —— FARR	***************************************	KILDONAN
_	HELYPTERID					
Moist pl	teris (Ehrh.) Sloss aces on heaths, be LAIRG ROGART EDDRACHILLIS	anks and n	nountains. GOLSPIE	Commo	n, wides	
	pteris (L.) Slosson eks and in woods ———————————————————————————————————		in north a			east. KILDONAN
Screes at	teris (L.) Slosson nd rocks on hills a ————————————————————————————————————	and woods DORNOCH	. Occasion	al. CLYNE	LOTH	KILDONAN
Limesto:	tiana (Hoffm.) Slo ne screes. Rare.	osson (108)	Limeston	e Fern		
Assynt (	$\overline{Inchnadamph}$ )					
POLYPODIACEAE Polypodium L.						
P. vulgare L. (107, 108) Polypody Woods, banks and walls. Common, widespread. sub sp. vulgare						
CREICH ASSYNT	LAIRG ROGART EDDRACHILLIS	DORNOCH DURNESS		CLYNE FARR	LOTH	KILDONAN
sub sp. j	orionodes Rothm. ——————— EDDRACHILLIS	DURNESS	TONGUE	FARR		KILDONAN

#### MARSILEACEAE

Pilularia L.

P. globulifera L. (107) Pillwort

Creich (Invershin, 1834, R.G., Plentiful, 1840, W.H.C., Shin Bridge, 1893, A.B.)

Now extinct.

## **OPHIOGLOSSACEAE**

Botrychium Sw.

B. lunaria (L.) Sw. (107, 108) Moonwort

Pastures, dunes and moors. Frequent.

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

KILDONAN

### Ophioglossum L.

0. vulgatum L. (108) Adder's-tongue

Grassy places. Rare.

ASSYNT EDDRACHILLIS DURNESS ·

### **SPERMATOPHYTA**

GYMNOSPERMAE PINACEAE

Pinus L.

P. sylvestris L. (107, 108) Scots Pine

Widely planted throughout the county.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

### CUPRESSACEAE

Juniperus L.

J. communis L. (107, 108) Juniper

On heaths, dunes, moors, sea-cliffs, mountain rocks and woods. Common. Very variable from gnarled prostrate plants to shrubs 4 ft high.

Includes

sub sp. communis, sub sp. nana and intermediate forms.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

ANGIOSPERMAE DICOTYLEDONES RANUNCULACEAE Caltha L.

C. palustris L. (107, 108) Marsh Marigold

Marshes, ditches and banks of streams. Ascends to 2500 ft on Ben More. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

sub sp. palustris. The Commoner form.

sub sp. minor (Mill.) Clapham. Frequent in the north and on hills.

#### Trollius L.

T. europaeus L. (107, 108) Globe-flower

In damp pastures, fields and mountains. Common at sea-level in the north and west.

CREICH LAIRG ROGART —— CLYNE —— KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Anemone L.

A. nemorosa L. (107, 108) Wood Anemone

Woodlands. Frequent in the south-east, local elsewhere.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS — TONGUE FARR

#### Ranunculus L.

R. acris L. (107, 108) Meadow Buttercup

Meadows, fields and roadsides. Common, widespread. Ascends to 2500 ft.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS — TONGUE FARR

R. repens L. (107, 108) Creeping Buttercup

Fields and waste places. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

R. bulbosus L. (107, 108) Bulbous Buttercup

Dry grassland and dunes. Occasional in sandy coastal areas in the east and north.

CREICH ASSYNT	LAIRG EDDRA	ROGART CHILLIS	DORNOCH DURNESS		CLYNE FARR	LOTH	KILDONAN
R. aurice Woodlar CREICH			ldiloeks B	uttercup	CLYNE		
		lls, 1960, ora, 1957,	J.A.) $M.McC.W$	·.)			
		and loch	Lesser Sp ans. Comm DORNOCH DURNESS	non, wides GOLSPIE	-	LOTH	KILDONAN
		(107) Cele stream. V ——	ery-leaved ery rare. DORNOCH	_			
$\overline{Dornoch}$	(Dorno	ch, 1955,	J.A.)				
		ditches, j	8) Ivy-leav ponds. Fre DORNOCH	quent.		LOTH	KILDONAN
R. trichophyllus Chaix (108) Thread-leaved Water-crowfoot sub sp. drouetii (Godr) Clapham Lochans. Rare.							
ASSYNT			DURNESS	TONGUE	FARR		
R. aquat Lochans.	,	108) Comi	mon Water	r-crowfoot			
Durness Farr (M	,	88)	DURNESS		FARR		
R. ficaria L. (107, 108) Lesser Celandine sub sp. ficaria Woods and shady banks. Frequent.							
CREICH ASSYNT	LAIRG EDDRAG	ROGART	DORNOCH DURNESS		CLYNE FARR	LOTH	KILDONAN



 $(J.\,B.\,Kenworthy)$ 



#### Thalictrum L.

T. alpinum L. (107, 108) Alpine Meadow-rue

Rocky slopes on hills. Frequent on western hills. At sea-level on north coast.

CREICH LAIRG ROGART — KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

T. minus L. (107, 108) Lesser Meadow-rue

On coastal dunes and limestone rocks. Frequent.

ORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

sub sp. montanum Wallr. On limestone rocks. Durness (Durness, 1897, E.S.M., 1950, J.A.) Tongue (Melness, 1900, E.S.M.)

sub sp. arenarium (Butcher) Clapham. On coastal dunes.

### BERBERIDACEAE

Berberis L.

**B.** vulgaris L. (108) Barberry Woods. Introduced. *Tongue* (*Tongue*).

### NYMPHAEACEAE

Nymphaea L.

N. alba L. (107, 108) White Water-lily

In lochs and lochans. Frequent in the north and west, local in east.

CREICH LAIRG ROGART —— GOLSPIE CLYNE —— KILDONA
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

Nuphar Sm.

N. pumila (Timm) DC. (107) Least Water-lily

In a lochan. Very rare.

Rogart (Little Rogart, 1960, M.McC.W. Only locality)

#### PAPAVERACEAE

Papaver L.

P. rhoeas L. (108) Common or Field Poppy On railway track. Casual. Very rare. Farr (Forsinard)

P. dubium L. (107, 108) I Roadsides and fields. Occ			are in no	orth.	
ASSYNT EDDRACHILLIS	DORNOCH DURNESS		CLYNE FARR	LOTH	KILDONAN
P. somniferum L. (107) C Garden Escape. CREICH ————————————————————————————————————	pium Pop	ру 			KILDONAN
Creich (Bonar Bridge) Kildonan (Kildonan)					
Meconopsis Vig.					
M. cambrica (L.) Vig. (10 Introduced. CREICH ————————————————————————————————————	7, 108) We	elsh Poppy	y 		
Chelidonium L.					
C. majus L. (107) Greater Introduced. Kildonan (Kildonan)	: Celandine				
FUMARIACEAN Corydalis Medic.	E				
C. claviculata (L.) DC. (19) Climbing Fumitory				or White	
Amongst rocks in woods  ASSYNT ——	and scrub.  ——  DURNESS	GOLSPIE	clyne Farr		KILDONAN
Golspie (Morvich) Clyne (Gordonbush, Strath	Brora)				
Kildonan (Helmsdale) Assynt (Elphin, Beannach Tongue (Rhi-Tongue)	h)				
Farr (Grumore)					

Fumaria L.

F. capreolata L. (108) White Ramping Fumitory

Eddrachillis (Kinlochbervie) Durness (Eriboll)
F. bastardii Bor. (107, 108) Tall Ramping Fumitory In cultivated fields. Very rare.  GOLSPIE  Golspie (Golspie) Assynt (Achmelvich)
F. muralis Sond. ex Koch (108) Common Ramping Fumitory sub sp. boraei (Jord.) Pugsl. Fields. Rare
Tongue (Tongue) Farr (Bettyhill)
F. officinalis L. (107, 108) Common Fumitory Fields and waste places. Frequent.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR
CRUCIFERAE Brassica L.
B. napus L. (107, 108) Rape Fields. Introduced. Frequent in east, rare in west.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT — FARR
B. rapa L. (108) Wild Turnip Fields. Introduced. Assynt (Lochinver)
Sinapis L.
S. arvensis L. (107, 108) Charlock Fields. Frequent.
CRETCH I AIDO DOGADE DODNOCH COLCUTE CIVNE LOTH FILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

S. alba L. (107, 108) White Mustard

Fields Very rare

Et-14. Total 1 D					
Fields. Introduced. Rare.	GOLS	CDIE			
	— TON		FARR		
Creich (Invershin)	2021		111111		
Golspie (Golspie)					
$Tongue\ (\ Tongue\ )$					
Farr (Bettyhill)					
Diplotaxis DC.					
D. muralis (L.) DC. (108) Casual. Very rare. Assynt (Lochinver)	Annual Wall-re	ocket			
Raphanus L.					
R. raphanistrum L. var. a Cultivated fields. Frequen	t.	Ì			
CREICH LAIRG ROGART ASSYNT EDDRACHILLIS	DORNOCH GOLS DURNESS TONG		CLYNE FARR	LOTH	KILDONAN
Crambe L.					
C. maritima L. (107) Sea I On foreshore at Dunrobin with the note that it may on the beach.	Gardens. Reco				
Cakile Mill.					
C. maritima Scop. (107, 10 On sandy seashore. Occasi					
	DORNOCH GOLS DURNESS TONG		CLYNE FARR	LOTH	KILDONAN
Lepidium L.					
L. heterophyllum Benth (A Smith's Cress	L. smithii Hook	) (107	7) Smith	's Pepp	erwort or
Roadsides and fields. Rare	·.				
LAIRG ROGART					KILDONAN
L. latifolium L. (107) Ditt	ander				
Introduced. Recorded 183		son v	vithout 1	locality.	

# Thlaspi L.

T. arvense L. (107) Field Roadsides, waste places a			st. Rare		
	DORNOCH		CLYNE		KILDONAN
Teesdalia R. Br.					
T. nudicaulis (L.) R. Br. In sandy places. Very ran ROGART			·		
Rogart (Tressady, 1951, 1 Dornoch (Cuthill Sands, 1		)			
Capsella Medic.					
C. bursa-pastoris (L.) Med Waste places, roadsides a CREICH LAIRG ROGART ASSYNT EDDRACHILLIS  Cochlearia L.	, ,	Frequent. GOLSPIE	erd's-pu CLYNE FARR	LOTH	KILDONAN
C. officinalis L. (107, 108 Sea-cliffs, shingle shores a CREICH ————— ASSYNT EDDRACHILLIS		arshes. Fre		LOTH	KILDONAN
C. alpina (Bab.) H. C. W Rock-ledges on mountain CREICH ————————————————————————————————————	DURNESS		e Scurvy	-grass	
C. scotica Druce (108) Sc Coastal rocks and shingle			d west co	oasts.	
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
C. danica L. (108) Danish On sandy sea-shores. Ran		ass			

DURNESS TONGUE FARR
Tongue (Kyle of Tongue) Farr (Invernaver)
Subularia L.
S. aquatica L. (107, 108) Awlwort Sandy margins of lochans. Occasional. Rare in the east.  ———————————————————————————————————
Lunaria L.
L. annua L. (107) Honesty Garden escape. Clyne (Brora, 1949, W.A.T.)
Draba L.
D. norvegica Gunn. (107, 108) Rock Whitlow-grass Rock-ledges on mountains. Very rare.  CREICH
Creich (Ben More, 1888, A.G.: 1959, D.A.R.) Durness (Ben Hope, 1833, J.M.; Meall Horn, 1959, D.A.R.)
D. incana L. (107, 108) Hoary Whitlow-grass Sandy turf by the sea and rock-ledges on mountains. Frequent.
CREICH — DORNOCH GOLSPIE — KILDONA ASSYNT — DURNESS TONGUE FARR
Erophila DC.

CREICH — DORNOCH GOLSPIE CLYNE — KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Cardamine L.

C. pratensis L. (107, 108) Cuckooflower or Lady's Smock In damp pastures. Common, widespread.

CREICH LATRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR C. flexuosa With. (107, 108) Wavy Bitter-cress or Wood Bitter-cress In moist shady places. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH ASSYNT EDDRACHILLIS DURNESS TONGUE FARR C. hirsuta L. (107, 108) Hairy Bitter-cress Waste places, roadsides, walls. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR Barbarea R. Br. B. vulgaris (L.) R. Br. (107, 108) Winter-cress or Yellow Rocket Moist banks. Very rare. \_\_\_\_ ROGART -FARR Rogart (Rogart, 1959, M.McC.W.) Farr (Altnaharra, 1885, F.J.H.) Cardaminopsis (C. A. Mey) Havek C. petraea (L.) Hiit. (107, 108) Northern Rock-cress Cliffs and quartz screes on hills. Rare. DURNESS -Kildonan (Ben Griam Beg, 1962, A.McC.S.) Durness (Foinaven, summit, 1833, J.M., 1957, E.A.B.) var. hispida DC. Durness (Ben Hope, 1833, J.M., 1900; E.S.M., 1914, G.C.D.; 1959, J.A.) Arabis L. A. hirsuta (L.) Scop. (107, 108) Hairy Rock-cress On dunes, banks and basic rocks, Occasional. DORNOCH GOLSPIE ASSYNT EDDRACHILLIS DURNESS TONGUE

Rorippa Scop.

R. nasturtium-aquaticum (L.) Hayek (107, 108) Water-cress In streams and ditches. Occasional.

CREICH LAIRG	DORNOCH		CLYNE		-
	DURNESS		FARR		
	201111200	10110011	2 221010		
R. microphylla (Boenn.)	Hyland (10	7 108) 0	ne-rowe	Water_	orege
In ditches. Occasional.	iiyiana (i	,, 100, 0	110-10 11 (1	1 11 40001-	01033
in ditelles. Occasional.	DODNOGT	COLCETT	OT TINE	T OMIT	**** D 0 3 1 1 3 1
	DORNOCH			LOTH	KILDONAN
	DURNESS	TONGUE	FARR		
TI I					
Hesperis L.					
W	.01.70	T7* 1 .			
H. matronalis L. (107, 10					
Shady damp places. Gard	-		al.		
CREICH LAIRG —	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT		-	-		
Alliaria Scop.					
A. petiolata (Bieb.) Cava	ra et Gran	de (107) G	arlic Mu	istard or	
Jack-by-the-Hedge		, ,			
Roadsides, Rare.					
CREICH —	DORNOCH				KILDONAN
					HIBDONAN
Sisymbrium L.					
Sisymbrium 12.					
S. officinale (L.) Scop. (1	07 100 1	odes Must	and		
		euge must	aru		
Waste places. Occasional					
CREICH ——	DORNOCH	GOLSPIE		LOTH	KILDONAN
ASSYNT —			FARR		
S. altissimum L. (108) Ta					
Waste places. Casual. Ve	ry rare.				
Assynt (Lochinver, 1944,	A.J.W.				
Arabidopsis (DC.)	Heynh.				
	·				
A. thaliana (L.) Heynh.	(107, 108)	Thale Cres	SS		
Roadsides, waste places.				are in we	est.
_	DORNOCH		CLYNE		KILDONAN
ASSYNT			FARR	2021	
AUDINI			T. ZATVIV		
Descurainia Webb	& Berth				

 ${\bf D.}$  sophia (L.) Webb ex Prantl. (107) Flixweed Waste places. Very rare.

 $\begin{array}{ll} Dornoch \; (Dornoch, \; 1952, J.A.; \; Poles, \; 1960, J.A.) \\ Golspie \; (Golspie, \; 1898, \; E.S.M. \; & W.A.S.) \end{array}$ 

### RESEDACEAE

Reseda L.

R. luteola L. (107) Weld or Dyer's Rocket On the railway bank. Casual. Creich (Invershin, 1888, W.C.)

### VIOLACEAE

Viola L.

and west.

V. riviniana Reichb. (107, 108) Common Dog-violet
On banks, heaths and woods. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

V. canina L. (107, 108) Heath Dog-violet On dunes, heaths and dry banks. Frequent in coastal areas in the north

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

V. lutea Huds. (108) Mountain Pansy On mountain grassland. Very rare.

SSYNT — TONGUE

Assynt (Inchnadamph, 1886, A.G.) Tongue (Ben Loyal, 1888, W.C.)

V. tricolor L. (107, 108) Wild Pansy

sub sp. tricolor. Cultivated ground and waste places. Frequent.

sub sp. curtisii (Forst.) Syme. On dunes.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

V. arvensis Murr. (107, 108) Field Pansy

Cultivated fields. Occasional in east, rare in north and west.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT —— TONGUE FARR

### **POLY GALACEAE**

Polygala L.

P. vulgaris L. (107, 108) Common Milkwort Dry, basic grassland and rocks. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

P. serpyllifolia Hose (107, 108) Heath Milkwort
Heaths and pastures. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

# **GUTTIFERAE**

Hypericum L.

H. androsaemum L. (108) Tutsan Introduced. Very rare. Assynt (Lochinver, 1944, A.J.W.)

**H. perforatum** L. (107) Perforate or Common St John's-wort On banks. Very rare. *Kildonan (Kinbrace, 1882, J.G.)* 

H. maculatum Crantz (107) Imperforate St John's-wort sub sp. obtusiusculum (Tourlet) Hayek On banks. Introduced.

Lairg (Lairg)

**H. tetrapterum** Fr. (107) Square-stalked St John's-wort Moist banks. Rare.

--- ROGART --- KILDONAN

H. pulchrum L. (107, 108) Slender St John's Wort
Grassy places and heaths. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

# CISTACEAE

Helianthemum Mill.

**H. chamaecistus** Mill. (107) Common Rockrose On banks and rocks. Rare.

# CARYOPHYLLACEAE

Silene L.

S. vulgaris (Moench) Gard Cultivated ground. Rare.	eke (107, 1	08) Bladd	er Camp	oion	
		GOLSPIE	FARR	LOTH	
S. maritima With. (107, 1 Shingle shores and cliffs. ASSYNT EDDRACHILLIS		on north an GOLSPIE	nd west		cal in east. KILDONAN
S. acaulis (L.) Jacq. (107, Rock-ledges and cliffs on Frequent.				nd north	coasts.
CREICH — — — ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		KILDONAN
S. dioica (L.) Clairv. (107 Sea-cliffs, banks and wood CREICH LAIRG ROGART ASSYNT EDDRACHILLIS		amon. GOLSPIE	CLYNE FARR	LOTH	KILDONAN
S. alba (Mill.) E. H. L. K Fields, roadsides. Occasio		, 108) Wh	ite Cam	pion	
ASSYNT —	DORNOCH DURNESS		FARR		KILDONAN
Lychnis L.					
L. flos-cuculi L. (107, 108 Marshes, common.	, 00				
CREICH LAIRG ROGART ASSYNT EDDRACHILLIS	DORNOCH DURNESS		FARR	LOTH	KILDONAN
Cerastium L.					
C. arvense L. (107, 108) I Sandy places. Occasional. ————————————————————————————————————			FARR		KILDONAN

C. tomentosum L. (107) S Garden escape. Kildonan (Kildonan)	now-in-su	mmer				
C. alpinum L. (107, 108). Screes and ledges on mou CREICH ————————————————————————————————————	ntains. Ra  DURNESS  cll)  or and Beg	TONGUE		· ··	KILDONAN	
C. arcticum Lange (107) A Rocks on mountains. Ver CREICH ————————————————————————————————————	y rare.		 D, D.A.H		<u> </u>	
C. holosteoides Fr. Comm C. fontanum Baumg. sub sp. trivale (Murb.) Ja Grassy places and waste g CREICH LAIRG ROGART ASSYNT EDDRACHILLIS	llas (107, 1 ground. Co DORNOCH	.08) ommon, wi	despread CLYNE FARR		KILDONAN	
sub sp. scoticum Jalas & Farr (Strathy)	P. D. Sell	(108)				
C. glomeratum Thuill. (10 Roadsides and cultivated CREICH LAIRG ROGART ASSYNT EDDRACHILLIS		nmon. GOLSPIE	e-ear CLYNE FARR	LOTH	KILDONAN	
C. atrovirens Bab. (107, 108) Sea Mouse-ear or Dark-green Mouse-ear Sandy places near the sea. Occasional.						
ASSYNT EDDRACHILLIS	DORNOCH DURNESS		CLYNE FARR	LOTH	KILDONAN	
C. semidecandrum L. (107) Dry sandy places near th			ear			
ASSYNT ——	DURNESS	GOLSPIE				

# Stellaria L.

S. ciliata Fr. (107) Fringed Pearlwort

				on Chickw . Common		read. Lотн	ZH DONAN
ASSYNT	EDDRAG		DURNESS	TONGUE	FARR	LOIH	KILDONAN
		ort.) Piré y the sea.		er Chickwe	eed		
				GOLSPIE			
Golspie (	Loch F	leet, 1897,	E.S.M., 1	(960, J.A.)			
S. negled Shady p			reater Chi	ckweed			
			90, E.S.M (.H., 1960,		FARR		
		07, 108) ( scrub. Co	Greater Sti	tehwort			
CREICH	LAIRG	ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT			DURNESS	TONGUE	FARR		
			Lesser Sti				
CREICH	LAIRG	ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT			DURNESS	TONGUE	FARR		
			) Bog Stit				
CREICH	LAIRG	s, woodiai ROGART	nds. Comm		OI WATE	TOTH	KILDONAN
ASSYNT	EDDRAG		DORNOCH DURNESS	TONGUE	FARR	LOTH	KILDONAN
S	agina L.						
<b>S. apetal</b> Bare pla			Annual P	earlwort			
					CLYNE		
07		40 FN		TONGUE			
			(McC.W.)				

Dana amaund Warr access	onal			
Bare ground. Very occasi	DORNOCH		CLYNE —	- KILDONAN
S. maritima Don (107, 10				
Sea-cliffs and salt marshe	-			
	DORNOCH			— KILDONAN
ASSYNT ——	DURNESS	TONGUE	FARR	
S. procumbens L. (107, 16) Waste places. Common,			rlwort	
CREICH LAIRG ROGART	-		CLYNE LO	TH KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR	
S. saginoides (L.) Karst. Cliff-ledges on mountains to 2900 ft. Rare. Creich (Ben More, 1960, Assynt (Stoer, 1959, J.A. Eddrachillis (Eylestrome, Tongue (Ben Loyal, 1888 Farr (Farr Bay, Swordly S. subulata (Sw.) Presl. (	B, sea-cliffs, D.A.R.) 1964, J.A. B, W.C.) T, Kirtomy,	bare grav ) Strathnave	elly places. er, Skelpick,	1960, J.A.)
Dry sandy and gravelly morth and west.				
—— BOGART				- KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR	
S. nodosa (L.) Fenzl (107 On wet sand and dunes l		Occasiona GOLSPIE		тн ——

## Minuartia L.

M. rubella (Wahlenb.) Hiern (108) Mountain or Alpine Sandwort Mountain cliffs. Very rare. Not seen for many years. Durness (Ben Hope, 1833, R.G.)

### Cherleria L.

 $\mathbb{C}.$  sedoides L. (107, 108) Cyphel

On mountain screes to 2900 ft. Frequent on mountains in the north and west. On Ben Griam in the east.

CREICH ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		KILDONAN
11001111						
н	onkenya Ehrh.					
H nenle	ides (L.) Ehrh.	107 108) S	oa Sandw	ort.		
	al sand and shi			OIU		
		DORNOCH		CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
70.0	ochvingia T					
141	oehringia L.					
M. triner	via (L.) Clairv.	(107) Three	-nerved S	andwort		
In wood	lands. Rare.					
	ROGART	DORNOCH	—			
Rogart (	(Cambusmore)					
Dornoch	(Cambasmore)					
A	renaria L.					
						-
	llifolia L. (107, 1					
	ground, dunes a	ana neias. U	ccasional.			
CREICH	s <b>erpyllifolia</b> LAIRG ROGART	DORNOCH	COLSDIE	CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS		FARR	LOIH	KILDUNAN
11001111		2020202	202,002	1 111111		
sub sp. l	eptoclados (Rei	ehb.) Nymai	n. Slender	Sandwo	rt	
		DURNESS	TONGUE			
		DUMESS	TONGCE			
A. norve	egica Gunn. sub	sp. norvegio	ea (108) A	retic or	Norwegi	ian
Sandwo	_	1 0	( - )		0	
Rocks o	n hills and river	shingle. Ve	ry rare.			
		h				
ASSYNT	In oh and amond	<del></del>	1			
Assynt (	Inchnadamph)					
S	pergula L.					
	- 0					
	sis L. (107, 108)		rey			
	ed fields. Comm					
CREICH		T DORNOCH		CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		

# Spergularia (Pers) J. & C. Presl

S. rubra (L.) J. & C. Pres Bare sandy and gravelly LAIRG ROGART EDDRACHILLIS	places. Occ	easional.	ourrey FARR		KILDONAN
S. media (L.) C. Presl (10 Muddy places in salt-mar					
ASSYNT ——	DORNOCH	GOLSPIE TONGUE	FARR		
S. marina (L.) Griseb. (10 In salt-marshes. Rare.	97, 108) Le	sser Sea-s	purrey		
ASSYNT —	DORNOCH	GOLSPIE TONGUE	FARR		
ILLECEBRACE Scleranthus L.	AE				
S. annuus L. (107) Annua Sandy waste ground. Old Golspie (Golspie, 1888, J.	record.				
PORTULACACE Montia L.	EAE				
M. fontana L. sub sp. lam In wet places, springs, dit				Blinks	
CREICH LAIRG ROGART ASSYNT EDDRACHILLIS		GOLSPIE		LOTH	KILDONAN
M. perfoliata (Willd.) How Cultivated ground. Rare.	well (107)	Spring Bea	auty or	Perfoliat	e Purslane
	DORNOCH	GOLSPIE	CLYNE		
M. sibirica (L.) Howell (leading by streams and on damp LAIRG ————————————————————————————————————				onal.	KILDONAN
CHENOPODIAC Chenopodium L.	EAE				

C. bonus-henricus L. (107) Good King Henry Golspie (Golspie Tower, 1888, J.G.) Old Record.

C. album L. (107, 108) F					
In cultivated ground and	~	_	ent.		
CREICH LAIRG ROGART			CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
C. rubrum L. (108) Red ( Assynt (Lochinver, 1886,		Record.			
Atriplex L.					
A. littoralis L. (107) Gras	s-leaved O	rache or S	hore Or	ache	
Sea-shore. Rare.					
	DORNOCH				· <del></del>
Dornoch (Ferrytown, 196	0, J.A.				
A. patula L. (107, 108) C	ommon Or	ache			
Cultivated fields and was			.•		
LAIRG	-				KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
A. hastata L. (107, 108) B. Waste places. Occasional		ache or Sp	pear-leav	red Orac	che.
ASSYNT -	DURNESS		FARR		TILL OITE
A. glabriuscula Edmonds					
On sandy and shingly she	ores. Occas	ional on a	ll coasts		
	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
A. laciniata L. (107) Fros		e			
On sandy sea-shores. Ran					
	DORNOCH	GOLSPIE		X .	
Farr (Farr, Bettyhill, 183	3, H.C.W.	)	FARR		
Suaeda Forsk. ex S	Scop.				
S. maritima (L.) Dumort	(107) Ann	nual Seabli	ite		
On salt-marshes. Rare.		1			
	DORNOCH	GOLSPIE			
Dornoch (Ferrytown, Dor	noch Skelh	2)			
Golspie (Loch Fleet)	, ~ , ~ , ~ , ~ , ~ , ~ , ~ , ~ , ~ , ~				

# Salsola L.

S. kali L. (107, 108) Price On sandy shores. Rare.	kly Saltwo	rt			
EDDRACHILLIS  Dornoch (Dornoch)  Golspie (Golspie)	DORNOCH	GOLSPIE	FARR		
Eddrachillis (Loch Laxfor Tongue (Melness) Farr (Melvich)	rd, $Sandwood$	(d)			
Salicornia L.					
S. europaea L. (107, 108) Muddy salt-marshes. Rar		GOLSPIE			· · · · ·
Dornoch (Ferrytown, Dor Golspie (Loch Fleet) Tongue (Kyle of Tongue)	noch, Skelb		more)		
TILIACEAE Tilia L.					
T.×europaea L. (107, 108 Introduced. Widely plant CREICH LAIRG ROGART ASSYNT EDDRACHILLIS		outh-east,	sparse i		-west. KILDONAN
MALVACEAE Malva L.					
M. moschata L. (107, 108 Grassy banks. Garden esc	eape. Occas	ional.			HILDOMAN
ROGART	DORNOCH	TONGUE			KILDONAN
M. sylvestris L. (107) Con Waste places. Occasional.		ow			
	DORNOCH	GOLSPIE	CLYNE	***************************************	KILDONAN
M. neglecta Wallr. (107) I Waste places. Rare.	Dwarf Mall	ow			

Golspie (Golspie) Kildonan (Helmsdale)

## LINACEAE

Linum L.

L. catharticum L. (107, 108) Fairy Flax or Purging Flax
Heaths, moors, pastures, dunes. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

### Radiola Hill

Line idea Doth /107 100\ All seed

		, ,	) An-seeu				
On bare	sandy s	soil. Rare	and local.				
			-	GOLSPIE			
				TONGUE			
Golspie	(Golsnie	. 1957. M	McC.W.				
Tongue	(Eilean	Iosal, 188	86, A.G., E 1960, J.A		Ron, 19	29, J.T.,	
	ERAN Jeraniun	IACEAE a L.					
G. prate			low Crane	sbill			
				GOLSPIE			KILDONAN
							REDONAN
		(107) Fr	ench Cran	esbill			
CREICH			DORNOCH				KILDONAN
G. disse	etum L.	(107, 108	) Cut-leave	ed Cranest	oill		
Grassy a	and was	te places.	Occasiona	l.			
		_	DORNOCH				KILDONAN
ASSYNT	EDDRA	CHILLIS			FARR		
G. molle	L. (107	, 108) Do	ve's-foot (	ranesbill			
			vaste place		n, wides	pread.	
CREICH	LAIRG		DORNOCH		CLYNE	_	KILDONAN
ASSYNT	EDDRA	CHILLIS	DURNESS	TONGUE	FARR		

G. robertianum L. (107, 108) Herb Robert Shady banks, walls and shingle shores. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

### Erodium L'Hérit.

E. cicutarium (L.) L'Hérit. (107, 108) Common Storksbill sub sp. dunense Andreas

Grassy and sandy places. Occasional.

DORNOCH — CLYNE LOTH KILDONAN ASSYNT — TONGUE FARR

## OXALIDACEAE

Oxalis L.

O. acetosella L. (107, 108) Wood-sorrel

In woods and shady places amongst rocks on hills. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

## BALSAMINACEAE

Impatiens L.

I. glandulifera Royle (107) Indian Balsam or Policeman's Helmet Introduced. Waste places. Golspie (Golspie)

## ACERACEAE

Acer L.

A. pseudoplatanus L. (107, 108) Sycamore Introduced, widely planted throughout the county.

## HIPPOCASTANACEAE

Aesculus L.

A. hippocastanum L. (107) Horse-chestnut Commonly planted in eastern areas.

## AQUIFOLIACEAE Ilex L. I. aquifolium L. (107, 108) Holly Amongst rocks on hills. Occasional in north and west. Introduced in south and east. CREICH ROGART DORNOCH -ASSYNT EDDRACHILLIS FARR DURNESS TONGUE LEGUMINOSAE Ulex L. U. europaeus L. (107, 108) Gorse Roadsides, old woodlands, heaths. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE U. gallii Planch. (107, 108) Western Gorse or Dwarf Furze On heaths. Very rare. KILDONAN ASSYNT Kildonan (Kinbrace, 1962, M.McC.W.) Assynt (Lochinver, 1944, A.J.W. & M.S.C.) Sarothamnus Wimm. S. scoparius (L.) Wimmer ex Koch (107, 108) Broom Amongst scrub and on heaths. Common in the east, sparse (introduced) in north and west. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT ----DURNESS TONGUE FARR Ononis L. O. repens L. (107, 108) Common Restharrow On dunes, Rare. GOLSPIE FARR Golspie (Golspie) Farr (Bettyhill, Farr)

Medicago L.

M. sativa L. (108) Lucerne In cultivated fields. Casual. Farr (Farr Bay, 1957, J.A.)

M. lupulina L. (107, 108) Fields, dunes and waste p			Notes to		
	DORNOCH	GOLSPIE	CLYNE		KILDONAN
EDDRACHILLIS	DURNESS		FARR		
Melilotus Mill.					
Meniotus Min.					
M. alba Medic. White Me In cultivated field. Casua Farr (Farr Bay, 1958, J.	1.				
Trifolium L.					
T. pratense L. (107, 108) Fields and pastures. Com		r			
CREICH LAIRG ROGART		GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS		FARR	2012	
T. medium L. (107, 108)	Zigzag Clo	ver			
Pastures. Occasional.					
EDDRACHILLIS		GOLSPIE	FARR		KILDONAN
EDDRACHILLIS			FARR		
T. hybridum L. (107, 108	) Alsike Cl	over			
Fields and roadsides. Occ					
	DORNOCH	described or surrounding			KILDONAN
EDDRACHILLIS	DURNESS	TONGUE	FARR		
T (10# 100) T	77 (7)				
T. repens L. (107, 108) V Pastures, dunes and road			espread		
CREICH LAIRG ROGART			CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
T. campestre Schreb. (10 Grassy places in dunes. (		p Trefoil			
	DORNOCH		CLYNE	LOTH	KILDONAN
	DURNESS	TONGUE	FARR		
T dubines Sibth /107 1	00 \ T aggar	Trofoil			
T. dubium Sibth. (107, 14) In grassy places. Freque	nt except i	n the inte	rior.		
CREICH LAIRG ROGART	-	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		

# Anthyllis L.

	eraria L. (107, 108) places, cliffs by the	ne sea, on h		-	nt near sea.	
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
L	otus L.					
	culatus L. (107, 1 places, dunes, scre				ead.	
CREICH		DORNOCH		CLYNE LOTH	KILDONAN	
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
	osus Schkuhr. (19 assland. Occasion		reater Bird	dsfoot-trefoil		
				CLYNE -	KILDONAN	
	EDDRACHILLIS	DURNESS	TONGUE	FARR		
A	astragalus L.					
	eus Retz. (107) Pu y turf and dunes					
		DORNOCH	GOLSPIE	CLYNE LOTH		
0	exytropis DC.					
	ri Bunge (108) Pres and sea-cliffs. I		ropis			
				FARR		
Farr (In	nvernaver, Bettyhi	Ill, Farr, K	irtomy, St			
V	icia L.					
	ta (L.) Gray (107 nd waste places.					
		DORNOCH	GOLSPIE	CLYNE LOTH	KILDONAN	
		-				
	V. tetrasperma (L.) Schreb. (107) Smooth Tare Grassy places. Rare. No recent records.					
CREICH			GOLSPIE			

Creich (Invershin, 1908, G.C.D.) Golspie (Golspie, 1903, G.C.D.)

V. cracca L. (107, 108) T		h			
Hedges and roadsides. Fr	equent.				
CREICH LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
V. orobus DC. (108) Woo Rocky places near the sea		etch			
places fiear the sec	. runc.				
ASSYNT EDDRACHILLIS Assynt (Lochinver, Achme Eddrachillis (Laxford, Ki					
V. sylvatica L. (108) Woo Dunes and cliffs near the		ional.			
ACCENTAGE	THENTES		EADD		
ASSYNT —— Assynt (Clachtoll)	DURNESS		FARR		
Durness (Kyle of Durness	. )				
Farr (Bettyhill, Farr, Arr		laich)			
Farr (Benghin, Farr, Arr	maaaie, me	www.j			
V. sepium L. (107, 108) E Roadsides, grassy places.					
	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
V. angustifolia L. (107, 10) Dunes and roadsides. Occ		-leaved V	$\operatorname{etch}$		
CREICH — ROGART	DORNOCH	GOLSPIE	CLYNE		KILDONAN
ASSYNT —		TONGUE	FARR		
V. sativa L. (107, 108) Co Fields. Occasional.	mmon Vet	eh			
CREICH —	DORNOCH		CLYNE		
ASSYNT —		TONGUE	FARR		
V. lathyroides L. (107) Sp	oring Vetch	1			
	DORNOCH			. —	KILDONAN
Dornoch (Mound, 1957, M Kildonan (Kilpheder, 196					

## Lathyrus L.

L. pratensis L. (107, 108) Meadow Vetchling
Roadsides and waste places. Frequent.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

L. montanus Bernh. (107, 108) Bitter Vetch
Woods, moorland, grassy banks. Common.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

DURNESS TONGUE

FARR

### ROSACEAE

Spiraea L.

ASSYNT EDDRACHILLIS

## Filipendula Mill.

F. ulmaria (L.) Maxim. (107, 108) Meadowsweet

Ditches, marshes and wet woods. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Rubus L.

R. idaeus L. (107, 108) Raspberry
Woods and hedges. Frequent in east, sparse in north and west.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

Sub-genus Rubus F. & S. Section Suberecti P.J.Muell.

R. scissus W.C.R.Wats. (107) Creich (Rosehall, 1959, J.A.) Dornoch (Dornoch, 1959, J.A.)

R. plicatus Weihe & Nees (107)
Creich (Rosehall & Invershin, 1896, E.S.M. & F.J.H.)

R. fissus Lindl. (107) Creich (Oykell Bridge, 1897, E.S.M.; Rosehall, 1960, J.A.; Invershin, 1908, G.C.D.)

Section Triviales P.J.Muell.

R. sublustris Lees (107) Creich (Invershin, 1897, E.S.M.) Dornoch (Mound, 1959, J.A.) Golspie (Golspie, 1903, G.C.D.)

R. latifolius Bab. (107) Dornoch (Mound, 1962, M.McC.W.) Clyne (Brora, 1957, M.McC.W.)

**R. purpureicaulis** W.C.R.Wats. (107) Dornoch (Skelbo Street, 1963, J.A.)

Section Sylvatici P.J.Muell.

R. nemoralis P.J.Muell. (108) Eddrachillis (Loch Stack, 1963, J.A.)

R. danicus (Focke) Focke (108)

Eddrachillis (Laxford Bridge, 1962, M.McC.W.)

Tongue (Tongue, 1897, E.S.M. & W.A.S.)

R. villicaulis Koehl ex Weihe & Ness (107, 108)

Abundant in the south and east, local in the north and west.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT —— DURNESS TONGUE ——

Section Appendiculati (Genev.) Sudre

R. mucronulatus Bor. (107)

Abundant in south and ea	ast. DORNOCH (	GOLSPIE	CLYNE	LOTH	KILDONAN
R. radula Weihe ex. Boen Dornoch (Dornoch, 1963, J. Golspie (Golspie, 1963, J. Loth (Culgower, 1963, J.A	J.À.) A.; 1897, E.	S.M. &	W.A.S.)		
Potentilla L.					
P. palustris (L.) Scop. (10 Marshes and bogs. Comm CREICH LAIRG ROGART ASSYNT EDDRACHILLIS		st, sparse GOLSPIE			KILDONAN
P. sterilis (L.) Gareke (10 Amongst scrub. Rare.	8) Barren S	strawberry	У		
	DURNESS '	TONGUE	FARR		
P. rupestris L. (107) Rock Calcareous cliff ledges. Ve	ory rare.			_	
P. anserina L. (107, 108) Waste places, dunes, shin CREICH LAIRG ROGART ASSYNT EDDRACHILLIS	Silverweed gle shores.	Frequent.	CLYNE FARR	LOTH	KILDONAN
P. crantzii (Crantz) G.Be Rock-ledges on hills. Ver		eh (107, 10	08) Alpi	ne Cinqu	uefoil KILDONAN
ASSYNT  Kildonan (Ben Griam) Assynt (Hills round Inchr Durness (Ben Hope)	DURNESS (nadamph)				RIDONAN
P. erecta (L.) Räusch (10 Heaths, grassland and wo CREICH LAIRG ROGART ASSYNT EDDRACHILLIS		on, wides GOLSPIE	pread. CLYNE FARR	LOTH	KILDONAN

	ns L. (108) Creep places. Rare.	ing Cinque	efoil			
ASSYNT	EDDRACHILLIS	DURNESS				
S	ibbaldia L.					
	mbens L. (107, 10 does on mountain ————————————————————————————————————		nal.	ser Cinqu  FARR	uefoil	
F	'ragaria L.					
	L. (107, 108) Windowski and woods.  LAIRG ROGART  EDDRACHILLIS	Frequent	GOLSPIE	CLYNE FARR	LOTH	KILDONAN
G	eum L.					
Shady p CREICH  G. rivale Wet sha	EDDRACHILLIS L. (107, 108) W dy places in ditcl	in east, sp DORNOCH ————————————————————————————————————	arse in no GOLSPIE TONGUE Gods. Freq	CLYNE FARR		KILDONAN
CREICH ASSYNT	LAIRG ROGART EDDRACHILLIS	DORNOCH DURNESS		CLYNE FARR	LOTH	
D	ryas L.					
Basic ro	etala L. (107, 108 cks on hills and c e in east.			uent in r	iorth an	
	EDDRACHILLIS n (Ben Griam)	DURNESS	TONGUE	FARR		KILDONAN
A	grimonia L.					
	oria L. (107, 108)		rare.			_
	Sharper de Calendario			FARR		

# Alchemilla L.

	a L. (107,						
		. Desce	ends to sea	-level. Fre	equent i	n west, i	are in east.
CREICH	LAIRG -						KILDONAN
ASSYNT	EDDRACH	ILLIS	DURNESS	TONGUE	FARR		
	cescens Wa ous grasslar						
ASSYNT Assynt (	 Inchnadan	nph)					
sub sp.	ulis Buser vestita (Bu nds. Freque		.E.Bradsha	aw (107, 1	08)		
CREICH ASSYNT	LAIRG RO	OGART	DORNOCH DURNESS	GOLSPIE	CLYNE	LOTH	KILDONAN
	filicaulis (10 n grassland			TONGUE	CLYNE FARR		KILDONAN
	erulans Bus -ledges. Ra		7)				
		_					
Grasslan	a Neygent.	nt.		COLODIA	OI WHY	T OMIT	KII DONAN
CREICH ASSYNT	EDDRACHI	DGART LLIS	DORNOCH DURNESS	TONGUE	CLYNE FARR	LOTH	KILDONAN
	ırae (Buser n grassland			108)			
ASSYNT	EDDRACHI	LLIS	DURNESS				
A	phanes L.						

A. arvensis L. (107, 108) Parsley Piert

DORNOCH -

EDDRACHILLIS DURNESS TONGUE FARR

A. microcarpa (Boiss. & Reut.) Rothm. (107, 108) Slender Parsley Piert Fields and wasteplaces. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS — TONGUE FARR

Acaena Mutis ex L.

A. anserinifolia (J.R. & G.Forst.) Druce (107, 108) Pirri-pirri-bur Garden escape.

Dornoch (Cambusmore)

Farr (Melvich)

#### Rosa L.

R. pimpinellifolia L. (107, 108) Burnet Rose

Dunes and sandy heaths. Frequent in all coastal areas.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

×R. glabra W-Dod (107) Clyne (Brora, 1898, E.S.M. & W.A.S.)

×R. involuta Sm. (107, 108)
Golspie (Golspie, 1903, G.C.D.)
Assynt (Lochinver, 1890, E.S.M. & F.J.H.)
Durness (Heilam, 1901, E.S.M.)
Farr (Bettyhill, 1910, E.S.M., Armadale & Melvich, 1916, E.S.M.)

×R. sabinii Woods (107, 108) Creich (Inveran, 1959, J.A.) Assynt (Loch Assynt & Kylesku, 1890, F.J.H. & E.S.M.) Farr (Invernaver, 1897, E.S.M. & W.A.S.)

R. canina L. var. globularis (Franch.) Dum. (108) Dog Rose Assynt (Lochinver, 1944, A.J.W. & M.S.C.)

R. dumalis Bechst. (107, 108)

Margins of woods, amongst scrub and roadsides. Frequent in east.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

### The undermentioned forms have been recorded:

var. typica W-Dod (107, 108)

Creich (Oykell Bridge, 1890, E.S.M., Rosehall & Inveran, 1959, J.A.)

Rogart (Rogart, 1959, J.A.)

Dornoch (Clashmore, Dornoch, Torboll, Mound, 1959, J.A.)

Golspie (Golspie, 1959, J.A.)

Assynt (Lochinver, Inchnadamph, Kylesku, 1890, F.J.H. & E.S.M.)

Durness (Ben Hope, 1827, R.G.)

Farr (Bettyhill, 1889, F.J.H. & E.S.M., 1908, G.C.D., Farr, 1959, J.A.)

## var. schlimpertii Hofm.

Assynt (Lochinver, 1944, A.J.W. & M.S.C.)

var. aspernata (Desegl.) Briggs. (107) Creich (Rosehall, 1890, F.J.H. & E.S.M.)

var. rueteri (God.) Cott. (107)

Lairg (Lairg, 1960, J.A.)

Dornoch (Astle, 1959, J.A.)

Golspie (Strath Fleet, 1960, J.A.)

## var. glaucophylla (Winch) W-Dod (107, 108)

Creich (Invershin, 1908, G.C.D., Bonar Bridge, 1960, J.A.)

Kildonan (Helmsdale, 1960, J.A.)

Assynt (Lochinver, 1944, A.J.W. & M.S.C., Inchnadamph & Kylesku, 1890, F.J.H. & E.S.M.)

var. subcanina Chr. (107, 108)

Rogart (Rogart, 1959, J.A.)

Golspie (Mound, 1959, J.A.)

Farr (Farr Bay, 1959, J.A.)

var. watsoni (Baker) W-Dod (108) Assynt (Lochinver, 1890, E.S.M.)

var. bakeri (Déségl.) W-Dod (107)

Golspie (Loch Fleet, 1897, E.S.M. & W.A.S.)

Clyne (Brora, 1897, E.S.M. & W.A.S.)

## f. setigera W-Dod (108)

Assynt (Lochinver & Achmelvich, 1944, A.J.W. & M.S.C.)

var. pruinosa (Baker) W-Dod (108)

Assynt (Lochinver, 1897, E.S.M. & W.A.S.)

R. villosa L. (107, 108)
Wood margins. Occasional.
DORNOCH GOLSPIE -
ASSYNT — FARR
771 CI (10 T 100)
var. mollis Sm. (107, 108)
Dornoch (Dornoch, 1903, G.C.D.)
Golspie (Golspie, 1903, G.C.D.)
Assynt (Traligill Burn, 1886, A.G.)
Farr (Bettyhill, 1897, W.F.M.)
C
f. coerulea Woods (107, 108)
Dornoch (Mound, 1959, J.A.)
Assynt (Inchnadamph, 1909, E.S.M. & W.A.S.)
Farr (Bettyhill, 1889, W.F.M., Melvich, 1916, E.S.M.)
×R. schoolbredi W-Dod (107)
Dornoch (Cuthill, 1959, J.A.)
Dornoch (Cantin, 1965, 9.A.)
R. tomentosa Sm. (107, 108)
Margins of woods. Occasional.
CREICH LAIRG — GOLSPIE — — —
ASSYNT — — — —
Abbini
var. typica W-Dod (107, 108)
Creich (Invershin, 1908, G.C.D.)
Lairg (Lairg, 1908, G.C.D.)
Assynt (Achmelvich, 1944, A.J.W., Unapool, 1886, A.G., Kylesku, 1908,
E.S.M.)
,
var. scabriuscula Sm. (107)
Golspie (Dunrobin, 1903, G.C.D.)
7 1 10 D 1 10 D 10 D
R. sherardii Davies (107, 108)
Amongst scrub. Frequent.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT —— DURNESS TONGUE FARR
var. typica W-Dod (107, 108)
Lairg (Lairg, 1960, J.A.)
Dornoch (Astle, Badnanish, 1960, J.A.)
Golspie (Dunrobin, 1960, J.A.)
$Kildonan\ (Helmsdale,\ 1960,\ J.A.)$
Assynt (Inchnadamph, 1890, E.S.M.)
Durness (Drocheid Mor, 1960, J.A.)
Farr (Farr Bay 1959 J.A., Melvich, 1916, E.S.M.)

# f. submollis (Ley) W-Dod (107, 108) Creich (Bonar Bridge, 1959, J.A.) Dornoch (Clashmore, Camore, 1959, J.A.) Assynt (Kylesku, 1909, E.S.M. & W.A.S.)

## f. pseudomollis (Baker) W-Dod (107, 108) Dornoch (Mound, 1959, J.A.) Clyne (Dalcharn, 1960, J.A.) Loth (Loth, 1960, J.A.) Durness (Sangomore, 1960, J.A.)

## f. uncinata (Lees) W-Dod (107, 108) Creich (Inveran, 1960, J.A.) Dornoch (Dornoch, 1959, J.A.) Tonque (Coldbackie, 1909, E.S.M. & W.A.S.)

var. omissa (Déségl.) W-Dod (107, 108) Lairg (Lairg, 1960, J.A.) Dornoch (Astle, 1960, J.A.) Farr (Farr Bay, 1959, J.A.)

## f. resinosoides (Crép.) W-Dod (107, 108) Creich (Rosehall, 1959, J.A.) Rogart (Rogart, 1959, J.A.) Dornoch (Dornoch, 1959, J.A.) Assynt (Lochinver, 1908, E.S.M.)

# var. woodsiana (Groves) W-Dod (107, 108) Dornoch (Evelix, 1959, J.A.) Clyne (Tressady, 1960, J.A.) Farr (Farr Bay, 1959, J.A.)

var. suberecta (Ley) W-Dod Creich (Oykell Bridge, 1909, E.S.M., Invershin, 1959, J.A.) Lairg (Lairg, 1960, J.A.) Rogart (Rogart, 1960, J.A.) Dornoch (Camore, 1959, J.A.) Assynt (Lochinver, Inchnadamph, Kylesku, 1909, E.S.M. & W.A.S.) Farr (Farr Bay, 1959, J.A., Bettyhill, Armadale, 1909, E.S.M.)

## f. glabrata Ley (108) Farr (Bettyhill, 1909, E.S.M.)

# R. rubiginosa L. (107) Sweet Briar Waste places. Escape from cultivation. Rare.

Dornoch (Dornoch, 1959, J.A.) Golspie (Golspie, 1903, G.C.D.)

#### Prunus L.

## P. spinosa L. (107, 108) Blackthorn

Amongst scrub and wood margins. Occasional in east, rare in north and west.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT —— DURNESS TONGUE FARR

## P. domestica L. (107) Wild Plum

Introduced. Old record.

Creich (Rosehall, 1890, F.J.H. & E.S.M.)

## P. avium (L.) L. (107, 108) Wild Cherry or Gean

Woodlands. Occasional. Introduced in west and north.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS —— FARR

#### **P. padus** L. (107, 108) Bird Cherry

Woodlands. Occasional in east, rare in north and west.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT — TONGUE FARR

#### Cotoneaster Medic.

# C. simonsii Bak. (107) Himalayan Cotoneaster

Escape from gardens.

Dornoch (Cambusmore)

Golspie (Dunrobin)

Clyne (Brora)

Kildonan (Kildonan)

# C. horizontalis Decne. (107) Wall Cotoneaster

Garden escape. Established on links.

Dornoch (Dornoch)

# C. microphyllus Wall. ex Lindl. (107) Small-leaved Cotoneaster

Garden escape.

Dornoch (Cambusmore)

Kildonan (Kildonan)

## Crataegus L.

ASSYNT EDDRACHILLIS

C. monogyna Jacq. (107, 108) Hawthorn Amongst scrub and in woods. Occasional, probably planted in the north. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN DURNESS TONGUE FARR ASSYNT EDDRACHILLIS Sorbus L. S. aucuparia L. (107, 108) Rowan Woods, scrub, mountain rocks. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH ASSYNT EDDRACHILLIS DURNESS TONGUE FARR S. aria (L.) Crantz sensu lato (107) Common Whitebeam Planted, Occasional. CREICH ---DORNOCH GOLSPIE S. rupicola (Syme) Hedl. (107, 108) Rock Whitebeam On limestone rocks. Very rare. DORNOCH -ASSYNT ----Dornoch (Cambusmore, 1939, P.M.H., 1962, A.M.G.) Assynt (Inchnadamph, 1826, R.G.) CRASSULACEAE Sedum L. S. rosea (L.) Scop. (107, 108) Roseroot Shingle shores, sea-cliffs and mountain cliffs. Frequent in north and west, rare in east. CREICH -LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR S. telephium L. (107) Orpine Woods. Very rare. Golspie (Dunrobin) S. anglicum Huds. (107, 108) English Stonecrop Sea-cliffs and shingle beaches. Occasional in west, rare in east. GOLSPIE

DURNESS TONGUE

FARR

S. album L. (107, 108) Whi Rocks and walls. Introduce		erop			
ROGART -		GOLSPIE			
ASSYNT —	-				
S. acre L. (107, 108) Biting Dunes, shingle beaches and ROGART D		requent in			KILDONA
ASSYNT EDDRACHILLIS D	URNESS	TONGUE	FARR		
S. forsteranum Sm. (107) R Introduced. Rare. Creich (Shin)	ock Ston	ecrop			
SAXIFRAGACEA Saxifraga L.	E				
S. nivalis L. (107, 108) Alpi Mountain cliffs, up to 2700 CREICH ————————————————————————————————————				Sink Strategy Control of the Control	
Creich (Ben More Assynt, 1 Durness (Meall Horn, 1959,					
S. stellaris L. (107, 108) Sta Wet rocks on mountains. Fr sea-level.			nd west.	Descend	s to
CREICH — — —				LOTH	
ASSYNT EDDRACHILLIS D	URNESS	TONGUE	FARR		
S. tridactylites L. (107, 108) Bare sandy places on dunes		walls. Rar			
			FARR		
Dornoch (Dornoch) Golspie (Golspie) Farr (Farr Bay)					
S. hypnoides L. (107, 108) Met rock-ledges on mounta		ea-level in		. Occasio	onal.
	URNESS		FARR		
S. aizoides L. (107, 108) Ye Stony ground and rock-ledg and west. Frequent in north	llow Saxi ges on mo	frage ountains. A	At sea-le		e north

CREICH							
ASSYNT	EDDRAG	CHILLIS	DURNESS	TONGUE	FARR		
Rock-led Frequen	lges on 1	mountain	s, stony g	Saxifrage round, sea sea-level	-cliffs an		st.
CREICH ASSYNT	EDDRAG	CHILLIS	DURNESS	TONGUE	FARR		KILDONAN
C	hrysospl	enium L.					
	4.C.1.	T /105	100) 0		10.11		
Wet sho	dy place	L. (107,	hos and st	osite-leave reams. Fre	a Golaei Sanont	1-saxiira	ge
CREICH			DORNOCH		CLYNE	LOTH	KILDONAN
ASSYNT	EDDRAG		DURNESS		FARR	LOIN	KILDONAN
		SSIACE.	AE				
P	arnassia	L.					
			Grass-of-H -slacks. Fr	equent.			
ASSYNT	EDDRAG	CHILLIS	DORNOCH DURNESS		FARR		KILDONAN
	ROSSU ibes L.	LARIA	CEAE				
		n.) Mert.		107, 108)	Red Curi	rant	
CREICH		ROGART		GOLSPIE TONGUE	FARR		
R. spicat Introduc Kildonan	$\mathrm{ed}.$		Downy C	urrant or	Erect-sp	iked ${ m Re}$	d Currant
			Black Curra				
CREICH			DORNOCH		FARR		
			) Goosebe				
CREICH			DORNOCH				KILDONAN
ASSYNT		LUGANI	DURNESS				KILDUNAN

#### DROSERACEAE

Drosera L.

D. rotundifolia L. (107, 108) Round-leaved Sundew
Wet peaty places in moors and bogs. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

D. anglica Huds. (107, 108) Great Sundew

Wet peaty places on moors and in bogs. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

 $\textbf{D}. \times \textbf{obovata}$  Mert. & Koch (D. rotundifolia  $\times$  anglica) (108) Wet peaty places. Occasional.

ASSYNT EDDRACHILLIS

FARR

**D.** intermedia Hayne (108) Oblong-leaved or Long-leaved Sundew Wet peaty places. Occasional, mainly in the north and west.

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

### LYTHRACEAE

Lythrum L.

L. portula (L.) D.A.Webb (107) Water Purslane Muddy margins of pools. Very rare.

--- ROGART DORNOCH --

Rogart (Rogart, 1957, M.McC.W.) Dornoch (Cuthill, 1958, J.A.)

# ELAEAGNACEAE

Hippophaë L.

H. rhamnoides L. (107, 108) Sea-buckthorn Introduced, Occasional.

GOLSPIE — LOTH — TONGUE FARR

# ONAGRACEAE

Epilobium L.

E. parviflorum Schreb. (107) Hoary Willowherb or Small-flowered Hairy Willowherb

Ditches and margins of p	onds. Rare DORNOCH				KILDONAN
E. montanum L. (107, 10 Shady damp places. Com	mon.				
CREICH LAIRG ROGART ASSYNT EDDRACHILLIS	DORNOCH DURNESS		CLYNE FARR	LOTH	KILDONAN
E. roseum Schreb. (107) S Garden weed. Rare.	Small-flowe	ered or Pa	le Willo	wherb	
			CLYNE		
E. adnatum Griseb. (107) Shady ditches. Rare.	Square-sta	alked Will	owherb		
					KILDONAN
E. obscurum Schreb. (107 Damp shady places. Com	mon.				
CREICH LAIRG ROGART ASSYNT EDDRACHILLIS	DORNOCH DURNESS		CLYNE	LOTH	KILDONAN
E. palustre L. (107, 108) Ditches, marshes, margin			, widesp	read.	
CREICH LAIRG ROGART ASSYNT EDDRACHILLIS			CLYNE FARR	LOTH	KILDONAN
E. anagallidifolium Lam. Wet places on mountains					
CREICH LAIRG —— ASSYNT EDDRACHILLIS	DURNESS	TONGUE			KILDONAN
E. alsinifolium Vill. (107, Wet places on western me					
ASSYNT ——	DURNESS	TONGUE	FARR		
E. nerterioides Cunn. (108 Introduced. Tongue (Loch Buidhe)	3) New Zea	land Willo	owherb		
Knocknan rock (Knocknar	n. 1973. I.	4.)			

Several hybrids have been recorded. Among these are:
E. alsinifolium × E. anagallidifolium E. alsinifolium × E. obscurum E. alsinifolium × E. palustre E. anagallidifolium × E. obscurum E. anagallidifolium × E. palustre E. montanum × E. obscurum E. obscurum × E. palustre
Chamaenerion Adans.
C. angustifolium (L.) Scop. (107, 108) Rosebay Willowherb Waste places, woodlands, rocks on mountains. Ascends to 1400 ft. Frequent in south and east, occasional in north and west. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR
Circaea L.
C. lutetiana L. (108) Enchanter's-nightshade Shady places in woods. Rare.
ASSYNT — DURNESS — — — — — — — — — — — — — — — — — —
C. intermedia Ehrh. (107, 108) Upland Enchanter's Nightshade Shady places amongst rocks and in woods. Rare.  ———————————————————————————————————
HALORAGACEAE Myriophyllum L.
M. spicatum L. (108) Spiked Water-milfoil In streams. Rare.
ASSYNT — DURNESS TONGUE —
M. alterniflorum DC. (107, 108) Alternate Water-milfoil

In streams. Frequent. LAIRG ROGART CLYNE LOTH KILDONAN DORNOCH GOLSPIE ASSYNT EDDRACHILLIS DURNESS TONGUE FARR HIPPURIDACEAE Hippuris L. H. vulgaris L. (107, 108) Mare's-tail Lochans. Occasional. ROGART DORNOCH -DURNESS -FARR EDDRACHILLIS CALLITRICHACEAE Callitriche L. C. stagnalis Scop. (107, 108) Common Water-starwort Ditches and ponds. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR C. platycarpa Kütz. (108) Various-leaved Water-starwort Ditches. Rare. ASSYNT ---DURNESS -FARR C. intermedia Hoffm. (107, 108) Intermediate Water-starwort sub sp. hamulata (Kütz.) Clapham Ditches, ponds and streams. Occasional. ROGART ---CLYNE ASSYNT EDDRACHILLIS FARR C. hermaphroditica L. (107, 108) Autumnal Water-starwort Streams, Rare. KILDONAN **EDDRACHILLIS** FARR CORNACEAE Chamaepericlymenum Hill C. suecicum (L.) Aschers. & Graebn. (107, 108) Dwarf Cornel Mountain moors. Frequent in west, rare in east. CREICH LAIRG LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE

## ARALIACEAE

Hedera L.

H. helix L. (107, 108) Ivy

Woodlands, hedges, walls, sea-cliffs. Frequent but absent from interior.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### UMBELLIFERAE

Hydrocotyle L.

**H. vulgaris** L. (107, 108) Marsh Pennywort Bogs and marshes. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Sanicula L.

S. europaea L. (107, 108) Sanicle Woods. Occasional in west, rare in east.						
		ROGART				 KILDONAN
ASSYNT	EDDRA	CHILLIS	DURNESS	TONGUE	FARR	

#### Anthriscus Pers.

A. caucalis Bieb. (107) Bur Che	ervil		
Waste places. Casual.			
	GOLSPIE	<del></del>	 KILDONAN
Golspie (Golspie)			
Kildonan (Helmsdale)			

A. sylvestris (L.) Hoffm. (107, 108) Cow Parsley
Fields, roadsides, waste places. Frequent.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Scandix L.

S. pecten-veneris L. (108) Shepherd's-needle Field. Old record. Farr (Melvich, 1886, F.J.H.)

# Myrrhis Mill.

M. odorata (L.) Scop. (107, 108) Sweet Cicely Roadsides and margins of fields. Occasional in east, rare in north and west.
CREICH — ROGART DORNOCH GOLSPIE — KILDONAN ASSYNT — TONGUE —
Torilis Adans.
T. japonica (Houtt.) DC. (107, 108) Upright Hedge-parsley Waste places and roadsides. Occasional in east, very rare in north.  CREICH —— ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN —— DURNESS —— ——  Durness (Balnakeil, 1964, A.G.K.)
Conium L.
C. maculatum L. (107, 108) Hemlock Waste places. Occasional.
DORNOCH GOLSPIE CLYNE — KILDONAN DURNESS — FARR
Apium L.
A. inundatum (L.) Reichb, f. (107) Lesser Marshwort Marshes. Rare.
DORNOCH —
Dornoch (Loch Fleet, 1888, J.G., 1962, V.S.S.)
Carum L.
C. carvi L. (108) Caraway Introduced. Rare.
DURNESS TONGUE FARR
Conopodium Koch
C. majus (Gouan) Loret (107, 108) Pignut Fields, banks and woods. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

# Pimpinella L.

P. saxifraga L. (107, 108 Dry grassy places and de			he north	coast,	rare in eas
		GOLSPIE	CLYNE		
	DURNESS		FARR		
Aegopodium L.					
A. podagraria L. (107, 10 Fields and waste places.		elder or (	outweed	l	
CREICH LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONA
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
Crithmum L.					
C. maritimum L. (108) R On sea-cliffs. Very rare.	Rock Samph	ire			
		,	FARR		
Farr (Strathy Point, Thr	ree plants, 1	959, M.M			
Oenanthe L.					
0. crocata L. (108) Hemburshes. Rare.	lock Water-	dropwort			
ASSYNT — Assynt (Lochinver, 1944,	A.J.W.				
Aethusa L.					
<b>A. cynapium</b> L. (107) Fo Waste places. Casual. Golspie (Golspie)	ol's Parsley	•			
Ligusticum L.					
L. scoticum L. (108) Scot Sea-cliffs, shingle. Freque		and wes	t coasts.		
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
Angelica L.					
A. sylvestris L. (107, 108	) Wild Ange	elica			

Wet woods, damp grassy places and banks, sea-cliffs. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH ASSYNT EDDRACHILLIS DURNESS TONGUE Peucedanum L. P. ostruthium (L.) Koch (107) Masterwort In old garden. Loth (Loth, 1959, M.McC.W.) Heracleum L. H. sphondylium L. (107, 108) Hogweed or Cow Parsnip Fields, waste places. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR Daucus L. D. carota L. (108) Wild Carrot Dunes and sandy fields. Frequent on north and west coasts. DURNESS TONGUE ASSYNT EDDRACHILLIS **EUPHORBIACEAE** Mercurialis L. M. perennis L. (107, 108) Dog's Mercury Sandy places. Very rare. CREICH FARR Euphorbia L. E. helioscopia L. (107, 108) Sun Spurge Cultivated ground. Frequent in north. DORNOCH -KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

E. peplus L. (107, 108) Petty Spurge

EDDRACHILLIS

Cultivated ground. Rare.

FARR

	issias L. (108) Cy ssland. Introduce		ge					
			TONGUE	FARR				
	OLYGONACEA olygonum L.	Œ						
	lare L. sensu lato oadsides, waste p			ss				
CREICH ASSYNT	LAIRG ROGART EDDRACHILLIS		GOLSPIE	CLYNE LOTH FARR	KILDONAN			
Golspie (	le (Lange) Small (Golspie, 1962, M (Durness)							
Rocky a	P. viviparum L. (107, 108) Alpine Bistort Rocky and grassy places on mountains, coastal pastures, at sea-level in the north. Frequent in north and west.							
ASSYNT	LAIRG ROGART EDDRACHILLIS	DURNESS	TONGUE	FARR	KILDONAN			
	ibium L. (107, 10 and ponds. Rare		oious Bisto	ort				
ASSYNT	EDDRACHILLIS	DORNOCH DURNESS		CLYNE	KILDONAN			
_	earia L. (107, 108) ed ground. Comm		k or Persic	earia				
CREICH ASSYNT	LAIRG ROGART	DORNOCH DURNESS		CLYNE LOTH FARR	KILDONAN			
P. lapathifolium L. (108) Pale Persicaria Cultivated ground. Rare.								
ASSYNT	EDDRACHILLIS	DURNESS						
	ppiper L. (108) Coces. Rare.	mmon Wa	ter-pepper					
ASSYNT	EDDRACHILLIS		-					
	olvulus L. (107, 10 ed fields. Occasion	•	oindweed					

—— — DORNOCH GOLSPIE CLYNE — KILDONAN ASSYNT EDDRACHILIS DURNESS TONGUE FARR

 ${\bf P.~cuspidatum~Sieb.~\&~Zucc.~(107,~108)~Japanese~Knotweed}$  Garden escape.

Creich (Inveran)
Assunt (Lochinver)

## Oxyria Hill

0. digyna (L.) Hill. (108) Mountain Sorrel

Wet rocky places on mountains. At sea-level on north coast. Frequent.

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Rumex L.

R. acetosella L. sensu lato (107, 108) Sheep's Sorrel

Fields, heaths, waste places. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

R. acetosa L. (107, 108) Common Sorrel

Grassy places. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

R. longifolius DC. (107, 108) Northern Dock or Butter Dock Damp places. Occasional.

CREICH — GOLSPIE CLYNE — KILDONAN — FARR

Farr (Bettyhill, 1889, F.J.H.) Old record.

R. crispus L. (107, 108) Curled Dock

Shingle beaches, dunes, fields, waste places. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

R. obtusifolius L. (107, 108) Broad-leaved Dock

Fields, waste places. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

**R. conglomeratus** Murr. (107, 108) Clustered Dock or Sharp Dock Damp grassy places. Rare.

ASSYNT EDDRACHILLIS — — — — —

## URTICACEAE

Urtica L.

U. urens L. (107, 108) Small Nettle Fields, waste places. Occasional in the east.

—— — DORNOCH GOLSPIE CLYNE — KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

U. dioica L. (107, 108) Common Nettle or Stinging Nettle Fields, waste places. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### ULMACEAE

Ulmus L.

U. glabra Huds. (107, 108) Wych Elm

Woodlands. Frequent in the south-east, occasional in north-west.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

### MYRICACEAE

Myrica L.

M. gale L. (107, 108) Bog Myrtle

Bogs, wet moors. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

# BETULACEAE

Betula L.

B. pendula Roth (107, 108) Silver Birch Woods and heaths on hills. Occasional.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

B. pubescens Ehrh. (107, 108) Downy Birch

Woods, heaths in wetter areas. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

B. nana L. (107, 108) Dwarf Birch Bogs and wet moors. Occasional.

LAIRG

TONGUE FARR

Lairg (Ben Hee)

Tongue (Ben Loyal, Ben Tongue)

Farr (Ben Klibreck, Strathy Bog)

hybrid B. nana×pubescens occurs on Ben Loyal

Alnus Mill.

A. glutinosa (L.) Gaertn. (107, 108) Alder Margins of lakes and streams. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### CORYLACEAE

Carpinus L.

C. betulus L. (107, 108) Hornbeam Introduced.

Golspie (Dunrobin)

Tongue (Borgie) Farr (Melvich)

Corylus L.

C. avellana L. (107, 108) Hazel

Woods, scrub, hedges. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

## FAGACEAE

Fagus L.

F. sylvatica L. (107, 108) Beech

Woods. Frequent in south-east, sparse in north and west. Introduced.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

Castanea Mill.

C. sativa Mill. (107) Sweet Chestnut In woods, Introduced, Rare.

Introduced. Very occasional.

DURNESS

S. fragili Introduc			ack Willow	V			
CREICH			DORNOCH	GOLSPIE	CLYNE		
ASSYNT	EDDRAC	HILLIS					
		.07, 108) y occasion ——	Purple Winal.  DURNESS				
S. vimin	alis L. (1	107, 108)	Osier				
			lanted rou	nd houses.	Absent	from int	erior.
CREICH			DORNOCH		CLYNE		KILDONAN
ASSYNT	EDDRAG	CHILLIS	DURNESS	TONGUE	FARR		
Scanre	a. T. (107	7 108) G	oat Willow				
			south-east		the nor	rth.	
CREICH	LAIRG		DORNOCH		CLYNE		KILDONAN
ASSYNT	EDDRAG	CHILLIS	DURNESS	TONGUE	FARR		
Sub sp. a Woods a CREICH	atrociner and scru	rea (Brot b. Commo ROGART	or Comm ) Silva & S on. DORNOCH DURNESS	Sobrinho (		) LOTH	KILDONAN
			red Willov				
_			nd. Comm	_	read.		
CREICH	LAIRG		DORNOCH		CLYNE	LOTH	KILDONAN
ASSYNT	EDDRAG	HILLIS	DURNESS	TONGUE	FARR		
	ans Sm. ces. Rar		3) Dark-lea	ved Willo	w		
Eddrach	EDDRAG	chillis ourie)					
S. phylic	cifolia L.	(107, 10	8) Tea-lea	ved Willov	V		
		ountains.					
		ROGART			-		
-	-		DURNESS	TONGUE	FARR		
S. repens L. (107, 108) Creeping Willow							

S. repens L. (107, 108) Creeping Willow sub sp. repens. Damp and wet heaths. Common. sub sp. argentea (Sm.) G. & A. Camus. Dune slacks and rocky heaths near the sea. Common.

CREICH ASSYNT	LAIRG ROGART EDDRACHILLIS	DORNOCH DURNESS		CLYNE LOTH FARR	KILDONAN			
	num L. (108) Dov ks on mountains.		v					
ASSYNT		DURNESS		FARR				
	nites L. (107, 108 cks on mountains		leaved Wi	llow				
ASSYNT		DURNESS			KILDONAN			
S. herbacea L. (107, 108) Dwarf Willow or Least Willow Bare ground and rock-ledges on mountains. Frequent on higher hills. CREICH LAIRG ROGART — KILDONAN								
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR				
	S. reticulata L. (108) Net-leaved or Reticulate Willow Mountain screes. Very rare.							
—— Durness	—— (Ben Hope, 1833	DURNESS, $J.M., 198$		F.)				
	RICACEAE oiseleuria Desv.							
L. procumbens (L.) Desv. (107, 108) Trailing Azalea or Loiseleuria On dry stony places on mountain moors. From 700 ft near the north coast to 2600 ft on Ben Hope. Chiefly in the north and west. Frequent. CREICH LAIRG ————————————————————————————————————								
Arctostaphylos Adans.								
A. uva-ursi (L.) Spreng. (107, 108) Bearberry Dry rocky places on mountains and heaths. Descends to sea-level on north coast. Common.  CREICH LAIRG — KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR								
A	rctous (A. Gray)	Nied.						

A. alpinus (L.) Nied. (107, 108) Alpine Bearberry or Black Bearberry On barren mountain tops. Frequent on hills in the north and west.

Descend CREICH ASSYNT	s to 400 ft on the	e north coa		CLYNE FARR		KILDONAN
C	alluna Salisb.					
	ris (L.) Hull (107, hs, moors, woods LAIRG ROGART EDDRACHILLIS	and dunes	. Common GOLSPIE	, widesp CLYNE FARR		KILDONAN
	rica L.	201111200	1011012	1121121		
E. tetral	ix L. (107, 108) C eaths, moors and LAIRG ROGART	woods. Co	mmon, wi	despread		KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS		FARR		
	ea L. (107, 108) He ths and moors. Containing ROGART EDDRACHILLIS		idespread. GOLSPIE	CLYNE FARR	LOTH	KILDONAN
V	accinium L.					
			GOLSPIE	CLYNE FARR	LOTH	KILDONAN
	llus L. (107, 108) moors and mount					
CREICH		DORNOCH DURNESS	GOLSPIE	-	LOTH	KILDONAN
	wet moors. Main					
CREICH ASSYNT	LAIRG ROGART EDDRACHILLIS	DURNESS	TONGUE	FARR		KILDONAN
In bogs.	Very rare.	anberry				

# PYROLACEAE

Pyrola L.

P. minor L. (107, 108) Common Wintergreen
Cliff-ledges on hills and in woods. Rare.
CREICH — GOLSPIE — — —
DURNESS TONGUE ——
Creich (Ben More Assynt, 1962, D.A.R.)
Golspie (Golspie, 1888, J.G., 1959, J.A.)
Durness (Ben Hope, 1900, E.S.M.)
Tongue (Rhi-Tongue, 1886, A.G.; Ben Loyal, 1887, J.H.)
P. media Sw. (107, 108) Intermediate Wintergreen
Rocky places on heaths. Rare.
CREICH — KILDONAN
Creich (Invershin, 1887, W.C., 1888, J.G.)
Kildonan (Ord, 1959, J.A.)
Farr (Strath Vagastie, 1899, W.F.M.)
P. rotundifolia L. (108) Round-leaved Wintergreen Cliff-ledges on hills. Very rare.
DURNESS —
Durness (Ben Hope, 1900, E.S.M., 1959, J.A.)
Orthilia Raf.
0. secunda (L.) House (107) Serrated Wintergreen
Pine-woods and rock-ledges on hills. Rare.
DORNOCH GOLSPIE CLYNE KILDONAN
Dornoch (Cambusmore, 1962, A.McG.S.)
Golspie (Ben Braghie, 1888, J.G.)
Clyne (Loch Brora, 1962, J.A.)
Kildonan (Achentoul, 1962, A.McG.S.)
Moneses Salisb.
M. uniflora (L.) A. Gray (107) One-flowered Wintergreen
In pine woods. Very rare.
GOLSPIE — —
Golspie (Balblair, 1890, F.C.C., 1897, E.S.M. & F.J.H., 1923, G.C.D.,
1960, J.A.; Mound, 1900, T.J.F.)

# **EMPETRACEAE** Empetrum L. **E. nigrum** L. (107, 108) Crowberry On moors, Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR E. hermaphroditum Hagerup (107, 108) Mountain Crowberry Mountain moors, mainly in the north and west, at the highest altitudes. Frequent. CREICH LAIRG CLYNE -KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR PLUMBAGINACEAE Armeria Willd. A. maritima (Mill.) Willd. (107, 108) Thrift sub sp. maritima Salt-marshes, coastal pastures, sea-cliffs and on mountains. Ascends to 3000 ft. Frequent. CREICH -DORNOCH GOLSPIE ASSYNT EDDRACHILLIS DURNESS TONGUE FARR PRIMULACEAE Primula L. P. scotica Hook. (108) Scottish Primrose Pastures by the sea. All along the north coast. Occasional. DURNESS TONGUE FARR

## Lysimachia L.

L. nemorum L. (107, 108) Yellow Pimpernel Woods and banks. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

L. vulgaris L. (107) Yellow Loosestrife Near old garden. An escape. Dornoch (Badnanish)

#### Trientalis L.

T. europaea L. (107, 108) Chickweed Wintergreen
Woods and moorland. Widely but sparsely distributed. Frequent.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT —— DURNESS TONGUE FARR

### Anagallis L.

Salt marshes, sandy and stony shores. Frequent.

DORNOCH GOLSPIE

DORNOCH GOLSPIE

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

## **OLEACEAE**

Fraxinus L.

F. excelsior L. (107, 108) Ash

Woodlands. Frequent in east, sparse (introduced) in north-west.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

# Ligustrum L.

L. vulga: Introduc	re L. (107, 108) Veed.	Wild Prive	t			
CREICH	ROGART		GOLSPIE		LOTH	
ASSYNT	Market and		TONGUE	FARR		
	ENTIANACEA entaurium Hill	Œ				
Damp sa	de (D. Turner) Gandy places by the (Dornoch Links,	DORNOCH	y rare.			_
G	entianella Moenc	h				
Grasslan CREICH ASSYNT	EDDRACHILLIS	equent by to dornoch durness	he sea. GOLSPIE TONGUE	CLYNE FARR	LOTH	KILDONAN
	ella (L.) Börner. nd sandy pasture			Felwort		
	<b>lruceana</b> Pritcha					
		DORNOCH	GOLSPIE	CLYNE		
			TONGUE	FARR		
sub sp. s	septentrionalis (D	ruce) Prite	chard (107	, 108)		
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
G. pulch	ra Brummet & F	Heywood (1	.08)			
ASSYNT						
	IENYANTHAC Ienyanthes L.	EAE				
	iata L. (107, 108 , bogs and lake-n		mmon.			

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

## BORAGINACEAE

Symphytum L.

DORNOCH GOLSPIE CLYNE LOTH KILDONAN  ASSYNT EDDRACHILLIS — TONGUE FARR  S. tuberosum L. (107) Tuberous Comfrey Roadside. Rare. — KILDONAN  Kildonan (Kinbrace)  Pentaglottis Tausch  P. sempervirens (L.) Tausch (107, 108) Green Alkanet  Hedges and roadsides. Occasional. — LAIRG — GOLSPIE — LOTH KILDONAN  ASSYNT — TONGUE —  Lycopsis L.  L. arvensis L. (107, 108) Bugloss In cultivated fields. Frequent. — DORNOCH GOLSPIE CLYNE LOTH KILDONAN  ASSYNT EDDRACHILLIS DURNESS TONGUE FARR  Myosotis L.  M. scorpioides L. (107, 108) Water Forget-me-not In wet places, ditches, ponds. Frequent.  CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN  ASSYNT EDDRACHILLIS DURNESS TONGUE FARR  M. secunda A. Murr. (107, 108) Creeping Forget-me-not In wet peaty places. Common.  CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN  ASSYNT EDDRACHILLIS DURNESS TONGUE FARR	S. officinale L. (107, 108) Common Comfrey Wet grassy places and ditches. Occasional.							
S. tuberosum L. (107) Tuberous Comfrey Roadside. Rare.  ———————————————————————————————————					CLYNE	LOTH	KILDONAN	
Roadside. Rare.  ———————————————————————————————————	ASSYNT	EDDRACHILLIS		TONGUE	FARR			
Pentaglottis Tausch  P. sempervirens (L.) Tausch (107, 108) Green Alkanet Hedges and roadsides. Occasional.  LAIRG — GOLSPIE — LOTH KILDONAN ASSYNT — TONGUE —  Lycopsis L.  L. arvensis L. (107, 108) Bugloss In cultivated fields. Frequent.  DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR  Myosotis L.  M. scorpioides L. (107, 108) Water Forget-me-not In wet places, ditches, ponds. Frequent.  CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR  M. secunda A. Murr. (107, 108) Creeping Forget-me-not In wet peaty places. Common.  CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR			berous Cor	nfrey			KILDONAN	
Pentaglottis Tausch  P. sempervirens (L.) Tausch (107, 108) Green Alkanet Hedges and roadsides. Occasional.  LAIRG — GOLSPIE — LOTH KILDONAN ASSYNT — TONGUE —  Lycopsis L.  L. arvensis L. (107, 108) Bugloss In cultivated fields. Frequent.  — DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR  Myosotis L.  M. scorpioides L. (107, 108) Water Forget-me-not In wet places, ditches, ponds. Frequent.  CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR  M. secunda A. Murr. (107, 108) Creeping Forget-me-not In wet peaty places. Common.  CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR							22220 021221	
P. sempervirens (L.) Tausch (107, 108) Green Alkanet Hedges and roadsides. Occasional.  LAIRG — GOLSPIE — LOTH KILDONAN ASSYNT — TONGUE —  Lycopsis L.  L. arvensis L. (107, 108) Bugloss In cultivated fields. Frequent.  — DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR  Myosotis L.  M. scorpioides L. (107, 108) Water Forget-me-not In wet places, ditches, ponds. Frequent.  CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR  M. secunda A. Murr. (107, 108) Creeping Forget-me-not In wet peaty places. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR	Kildonar	n(Kinbrace)						
Hedges and roadsides. Occasional.  LAIRG — GOLSPIE — LOTH KILDONAN ASSYNT — TONGUE —  Lycopsis L.  L. arvensis L. (107, 108) Bugloss In cultivated fields. Frequent.  — DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR  Myosotis L.  M. scorpioides L. (107, 108) Water Forget-me-not In wet places, ditches, ponds. Frequent. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR  M. secunda A. Murr. (107, 108) Creeping Forget-me-not In wet peaty places. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR	P	<b>entaglottis</b> Tauscl	n					
Lycopsis L.  Lycopsis L.  L. arvensis L. (107, 108) Bugloss In cultivated fields. Frequent.  ———————————————————————————————————				08) Green	Alkanet	j		
Lycopsis L.  L. arvensis L. (107, 108) Bugloss In cultivated fields. Frequent.  ———————————————————————————————————				GOLSPIE		LOTH	KILDONAN	
L. arvensis L. (107, 108) Bugloss In cultivated fields. Frequent.  ———————————————————————————————————	ASSYNT	,	·	TONGUE	1			
In cultivated fields. Frequent.  ———————————————————————————————————								
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR  Myosotis L.  M. scorpioides L. (107, 108) Water Forget-me-not In wet places, ditches, ponds. Frequent. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR  M. secunda A. Murr. (107, 108) Creeping Forget-me-not In wet peaty places. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR								
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In wet peaty places. Common.  CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR						230 222	22220011111	
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR								
,		· ·		GOLSPIE	CLYNE	LOTH	KILDONAN	
TO THE CALL IN COLUMN AS A SECOND CO. L. P.	ASSYNT	EDDRACHILLIS			FARR			
M. caespitosa K. F. Schultz (107, 108) Tufted Forget-me-not In marshes and ponds. Frequent but absent from the interior.								
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN		**	-					
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR	ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR			

M. arvensis (L.) Hill (107, 108) Field Forget-me-not In cultivated fields, dunes and waste places. Frequent.							
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR							
M. discolor Pers. (107, 108) Changing Forget-me-not or Yellow and Blue Forget-me-not In dry bare waste places. Common.							
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN							
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR							
M. ramosissima Rochel (107) Early Forget-me-not Waste places. Rare.							
GOLSPIE CLYNE							
Golspie (Golspie) Clyne (Brora)							
Mertensia Roth							
M. maritima (L.) Gray (107, 108) Northern Shore-wort or Oyster Plant On coastal shingle. Rare. Decreasing.							
GOLSPIE — LOTH KILDONAN							
ASSYNT EDDRACHILLIS — GOLSPIE — LOTH KILDONAN Golspie (Dunrobin, 1903, G.C.D., very scarce, now extinct)							
GOLSPIE — LOTH KILDONAN  ASSYNT EDDRACHILLIS — TONGUE FARR  Golspie (Dunrobin, 1903, G.C.D., very scarce, now extinct)  Loth (Loth, 1965, M.M., one plant)  Kildonan (Helmsdale, 1845, D.R., now extinct)  Assynt (Inverkirkaig, 1886, A.G.; Clachtoll, 1956, J.A.)							
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ASSYNT EDDRACHILLIS — TONGUE FARR  Golspie (Dunrobin, 1903, G.C.D., very scarce, now extinct)  Loth (Loth, 1965, M.M., one plant)  Kildonan (Helmsdale, 1845, D.R., now extinct)  Assynt (Inverkirkaig, 1886, A.G.; Clachtoll, 1956, J.A.)  Eddrachillis (Sandwood, 1919, now extinct)  Tongue (Skerray, 1956, J.A., two plants)  Farr (Kirtomy, 1895, E.S.M. & F.J.H., 1954, J.A., now extinct)  CONVOLVULACEAE  Convolvulus L.  C. arvensis L. (107) Field Bindweed  Recorded by H. C. Watson without locality.  Calystegia R. Br.  C. sepium (L.) R. Br. (107, 108) Hedge Bindweed or Larger Bindweed Hedges and waste places. Occasional.							
GOLSPIE — LOTH KILDONAN  ASSYNT EDDRACHILLIS — TONGUE FARR  Golspie (Dunrobin, 1903, G.C.D., very scarce, now extinct)  Loth (Loth, 1965, M.M., one plant)  Kildonan (Helmsdale, 1845, D.R., now extinct)  Assynt (Inverkirkaig, 1886, A.G.; Clachtoll, 1956, J.A.)  Eddrachillis (Sandwood, 1919, now extinct)  Tongue (Skerray, 1956, J.A., two plants)  Farr (Kirtomy, 1895, E.S.M. & F.J.H., 1954, J.A., now extinct)  CONVOLVULACEAE  Convolvulus L.  C. arvensis L. (107) Field Bindweed  Recorded by H. C. Watson without locality.  Calystegia R. Br.  C. sepium (L.) R. Br. (107, 108) Hedge Bindweed or Larger Bindweed							

C. pulchra Brummitt & Heywood (108) Hairy Bindweed Assynt (Inchnadamph)

### SOLANACEAE Lycium L.

L. chinense Mill. (108) China Teaplant or Duke of Argyll's Tea-plant On wall at roadside. An escape.

Durness (Balnakiel)

## Hyoscyamus L.

H. niger L. (107) Henbane In waste ground. Casual. Golspie (Golspie, 1898, E.S.M. & W.A.S.)

#### Solanum L.

S. dulcamara L. (107, 108) Bittersweet On waste ground. An escape. Creich (Bonar Bridge, 1962, J.A.) Assynt (Lochinver, 1944) Farr (Bettyhill, 1897, E.S.M.)

## SCROPHULARIACEAE

Verbascum L.

V. thapsus L. (107) Great Mullein or Aaron's Rod On waste ground. Casual. Golspie (Golspie, 1888, J.G., 1898, E.S.M. & W.A.S.)

#### Linaria Mill.

L. vulgaris Mill. (107, 108) Common Toadflax
On railway banks. Occasional.
CREICH LAIRG ROGART DORNOCH GOLSPIE \_\_\_\_ KILDONAN
\_\_\_\_ FARR

## Cymbalaria Hill

C. muralis Gaertn., Mey. & Scherb. (107, 108) Ivy-leaved Toadflax On walls. Garden escape.

—— —— GOLSPIE —— FARR

Golspie (Golspie, Little Ferry)

Eddrachillis (Scourie)

Farr (Melvich)

### Scrophularia L.

S. nodosa L. (107, 108) Common Figwort
Damp woods, banks and ditches. Occasional in south and east. Very local in north and west.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS — FARR

#### Mimulus L.

M. guttatus DC. (107, 108) Monkeyflower

Banks of streams. Introduced. Established in many localities. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

M. luteus L. (107, 108) Blood-drop-emlets

Banks of streams. Introduced. Much less frequent than M. guttatus.

ASSYNT — DURNESS TONGUE FARR

M. moschatus Dougl. ex Lindl. (107, 108) Musk

Banks of streams and ditches. Introduced. Occasional, near gardens.

CREICH LAIRG ROGART — GOLSPIE — KILDONAN

DURNESS TONGUE FARR

#### Erinus L.

E. alpinus L. (108) Fairy Foxglove Introduced. Farr (Bettyhill, 1959, D.P.Y.)

## Digitalis L.

D. purpurea L. (107, 108) Foxglove

In woods, heaths and banks. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Veronica L.

V. beccabunga L. (107, 108) Brooklime

In ditches and streams. Occasional.							
	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN		
ASSYNT EDDRACHILLIS	DURNESS		FARR				
V. anagallis-aquatica L. (	108) Blue	Water-spe	edwell				
In streams. Rare.	ĺ						
	DURNESS						
Durness (Balnakeil, Eribe	oll)						
	•						
V. scutellata L. (107, 108	Marsh Sr	peedwell					
Wet places, ditches, pond			ıt.				
CREICH LAIRG ROGART	_	-	CLYNE	LOTH	KILDONAN		
ASSYNT	DURNESS		FARR	LOIL	RIEDONAN		
ASSINI ——	DUMMESS	TONGOL	FARI				
W - 60 - 10 T /10 T 100	TT	1 11					
V. officinalis L. (107, 108			1				
Dunes, heaths and woods							
	DORNOCH		CLYNE	LOTH	KILDONAN		
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR				
		. ~					
V. chamaedrys L. (107, 10							
Woods, pastures, dunes a				-			
CREICH LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN		
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR				
V. serpyllifolia L. (107, 10	8) Thyme	-leaved Sp	eedwell				
sub sp. serpyllifolia							
Grasslands and waste pla	ces. Comm	on, wides	pread.				
CREICH LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN		
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR				
sub sp. humifusa (Dickso	n) Syme						
Damp places on mountain		nal.					
CREICH					KILDONAN		
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR				
V. arvensis L. (107, 108) Wall Speedwell							
Cultivated fields. Common.							
		COLCDIE	OT WATE	LOTH	KILDONAN		
	DORNOCH		CLYNE	LOIL	ALLDUNAN		
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR				
W hedenicalis T (107 100) Templement Constant							
V. hederifolia L. (107, 108) Ivy-leaved Speedwell							
In waste places. Occasion							
	DORNOCH				KILDONAN		
ASSYNT			FARR				

V. persica Poir. (107, 108) Common Field-speedwell or Buxbaum's Speedwell In cultivated fields. Frequent. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR V. polita Fr. (108) Grey Field-speedwell Waste ground. Rare. DURNESS -FARR V. agrestis L. (107, 108) Green Field-speedwell Cultivated ground. Occasional. LATEG DORNOCH -KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR V. filiformis Sm. (107, 108) Slender Speedwell At roadsides amongst grass. Casual, rare. DORNOCH -KILDONAN ASSYNT TONGUE FARR Pedicularis L. P. palustris L. (107, 108) Marsh Lousewort or Red-rattle In marshes. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR P. sylvatica L. (107, 108) Lousewort Damp heaths and moors. Common, widespread. ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE Rhinanthus L. R. serotinus (Schönh) Oborny (108) Greater Yellow-rattle Farr (Bettyhill, 1923, G.C.D.) R. minor L. (107, 108) Yellow-rattle Grassy places. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH ASSYNT EDDRACHILLIS DURNESS TONGUE FARR sub sp. stenophyllus (Schur.) O. Schwarz (107, 108) Damp grassy places. Common.

ROGART DORNOCH GOLSPIE CREICH LAIRG CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR sub sp. monticola (Sterneck) O. Schwarz (107, 108) Grassy places. Common. CREICH DORNOCH GOLSPIE DURNESS TONGUE ASSYNT FARR sub sp. borealis (Sterneck) Druce. (107, 108) Grassy places on hills, at sea-level on north coast. Occasional. CREICH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR Melampyrum L. M. pratense L. (107, 108) Common Cow-wheat sub sp. pratense var hians Druce. Woods and heaths. Common, widespread. LAIRG ROGART DORNOCH GOLSPIE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR Euphrasia L. E. officinalis L. (107, 108) Eyebright Heaths, moors and screes, Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR E. micrantha × nemorosa Durness. E. scottica Wettst. (107, 108) On wet moors. Not uncommon in the north and west, rare in the east. Ascends to 2000 ft on Ben More. CREICH LAIRG DORNOCH -ASSYNT EDDRACHILLIS DURNESS TONGUE **E. frigida** Pugsl. (107, 108) Rocky places on mountains. Ascends to 2500 ft on Ben More. Rare. CREICH FARR ASSYNT DURNESS TONGUE Creich (Ben More) Assynt (Craig Liath) Durness (Ben Hope) Tongue (Ben Loyal) Farr (Ben Klibreck) E. frigida × micrantha. Ben Loyal

E. frigida × scottica. Ben Hope

E. confusa Pugsl. (107, 108)

Moorland and coastal pastures. Occasional.

CREICH — DORNOCH GOLSPIE CLYNE — DURNESS TONGUE FARR

E. brevipila Burnat & Gremli (107, 108)

Pastures, fields and roadsides. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

E. brevipila $\times$ micrantha. Assynt, Eddrachillis, Durness, Farr, Dornoch E. brevipila $\times$ curta. Dornoch

var. reayensis Pugsl. (108) Pastures. Occasional.

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR
Assynt (Achmelvich)
Eddrachillis (Oldshoremore)
Tongue (Melness)
Farr (Bettyhill, Farr, Armadale & Port Skerra)

- E. brevipila var. reayensis × marshallii. Assynt and Farr
- E. brevipila var. reayensis × micrantha. Assynt
- E. brevipila var. reayensis × nemorosa. Farr and Tongue

Odontites Ludw.

O. verna (Bellardi) Dumort sub sp. verna (107, 108) Red Bartsia

Cultivated fields and roadsides in coastal areas. Frequent.

CREICH LAIRG —— DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

## OROBANCHACEAE

Orobanche L

**0.** alba Steph. ex Willd. (108) Thyme Broomrape or Red Broomrape On sea cliffs. Very rare. Eddrachillis (Oldshoremore)

## LENTIBULARIACEAE

Pinguicula L.

P. lusitanica L. (107, 108) Pale Butterwort In bogs. Frequent in the west.

OPETOH	LAIRG					KILDONAN		
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		ALLOOTILL		
	:	~ 70						
	P. vulgaris L. (107, 108) Common Butterwort Bogs, wet heaths. Common, widespread.							
CREICH	LAIRG ROGART	DORNOCH		CLYNE	LOTH	KILDONAN		
ASSYNT	EDDRACHILLIS	DURNESS		FARR				
τ	Iltricularia L.							
	ecta Lehm. (108) ans. Rare.	Greater Bl	$\operatorname{adderwort}$					
ASSYNT Assumt	EDDRACHILLIS (Little Assynt, 19)	DURNESS 39. P.M.H	Stoer, 19	44. A.I.	$W_{\cdot}$			
	illis (Sandwood,			11, 1110	,			
Durness	s (Farrmheal, 196	$\theta$ , $D.A.R.$	)					
II inter	media Hayne (108	8) Interme	diata Blad	derwort				
	s and lochans. Fre							
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR				
	or L. (108) Lesser ans. Rare.	Bladderw	ort					
ASSYNT	EDDRACHILLIS							
	(1833, R.G., Achi	more, 1886	$\beta, A.G.$					
Eddrack	hillis (Scourie, 193	39, P.M.H	. & E.C.W	<sup>7</sup> .)				
_	LABIATAE Mentha L.							
	ensis L. (107, 108) evated fields. Rare		t					
	LAIRG					KILDONAN		
			TONGUE	FARR				
M.×ve	rticillata L. (108)							
	ardens. Local.							
T'ongue	(Tongue)							
M.×ge	ntilis L. (108)							
	f ditches. Local.							
Assunt	(Stoer, 1944, A.J.	$(W_{\cdot})$						

M. aqua	tica L. (107, 10	08) Water Mi	nt			
Ditches,	marshes, strea	ams and lake	s. Frequen	t.		
CREICH	LAIRG ROGAL	RT DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
M × nine	wita T /100\ T	Donnormint				
var. pipe	erita L. (108) I	eppermint				
	ditches. Local					
	(Tongue)	•				
	$ettyhill,\ Melvic.$	h)				
(-	,	,				
M. spica	ta L. (107, 108	) Spear Mint				
	laces. An escap					
	ROGAI			CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS		FARR		
M.×cord	difolia Opiz (10	97)				
Damp pl	laces. Local.					
Kildonar	n (Helmsdale)					
M.×nilia	aca Jussex Jac	q. (107, 108)				
Damp pl	laces. Local.					
Clyne (S	trath Brora, 19	48, W.A.T.)				
Assynt (	Lochinver, 194	(4, A.J.W.)				
Farr (M	(elvich)					
L	ycopus L.					
_	T /108 1	001 0:				
	aeus L. (107, 1	.08) Gipsywo	rt			
Damp p	laces. Rare.				T:08177	
	EDDRACHILLIS	DURNESS			LOTH	KILDONAN
	EDDRACHILLIS	DURNESS				
ηn	hymus L.					
	nymus 12.					
T. druce	i Ronn. (107, 1	108) Wild Th	vme			
	ssland, dunes, l			mon, wie	despread	•
	LAIRG ROGAL				_	KILDONAN
	EDDD VOILLIE					

Acinos Mill

A. arvensis (Lam.) Dandy (107) Basil Thyme

On railway-bank. Casual. Creich (Invershin, 1890, E.S.M. & F.J.H.)

#### Prunella L.

P. vulgaris L. (107, 108) Selfheal

Grassy places. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Stachys L.

S. arvensis (L.) L. (107, 108) Field Woundwort In cultivated fields. Rare.

— EDDRACHILLIS DURNESS TONGUE FARR Kildonan (Helmsdale, 1889, W.R.L.)

Eddrachillis (Kinlochbervie, 1952, M.McC.W.)

Durness (Durness, 1887, E.S.M.)

Tongue (Tongue, 1833, H.C.W.)

Farr (Bettyhill, 1890, W.F.M.)

S. palustris L. (107, 108) Marsh Woundwort

Ditches, marshes. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

S. sylvatica L. (107, 108) Hedge Woundwort Woods and damp shady places. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

 $S. \times ambigua Sm. (S. palustris \times sylvatica) (107, 108)$ 

Ditches. Occasional.

ASSYNT EDDRACHILLIS DURNESS TONGUE FARE

#### Lamium L.

L. amplexicaule L. (107, 108) Henbit Dead-nettle Cultivated fields. Occasional.

CREICH LAIRG — DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

L. molucellifolium Fr. (107, 108) Northern Dead-nettle

KILDONAN

Cultivat	ed fields. Occasio	nal.		OT TIME	T.O	W. F. D. O. T. L. T.
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	CLYNE FARR	LOTH	KILDONAN
_	dum Vill. (108) Coated field. Rare.		Dead-nettl	e 		
				FARR		
	ed fields and was		Frequent.	CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
	a L. (108) White blaces. Casual.	Dead-nett	le			
Durness	EDDRACHILLIS illis (Kinlochberv (Durness) (Tongue, 1845, H		I.McC.W.			
G	laleopsis L.					
	hit L. (107, 108) ond waste places.		lemp-nettl	e		
CREICH ASSYNT	LAIRG ROGART EDDRACHILLIS	DORNOCH		CLYNE	LOTH	KILDONAN
	Boenn. (107, 10 nd waste places.					
		DURNESS		FARR		
	osa Mill. (108) Land waste places.		ed Hemp-	nettle		
	EDDRACHILLIS	DURNESS				
(	Glechoma L.					
	racea L. (107, 108 Occasional.	3) Ground	Ivy			
CREICH	ROGART	DURNESS	GOLSPIE	CLYNE		

#### Scutellaria L.

ASSYNT EDDRACHILLIS

Teucrium L.

ASSYNT EDDRACHILLIS

Ajuga L.

ASSYNT EDDRACHILLIS

**A. reptans** L. (107, 108) Bugle

CREICH -

S. galericulata L. (107, 108) Skullcap Wet grassy places. Occasional.

ROGART

T. scorodonia L. (107, 108) Wood Sage

Woods, dry heaths, dunes and screes. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CO.

#### Damp woods and banks. Ascends to 1400 ft on Ben Griam. Occasional. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE KILDONAN ASSYNT EDDRACHILLIS DURNESS FARR A. pyramidalis L. (107, 108) Pyramidal Bugle Ledges on basic rocks. Occasional. CREICH ---DORNOCH GOLSPIE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS ---FARR PLANTAGINACEAE Plantago L. P. major L. (107, 108) Greater Plantain Fields, roadsides and waste places. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR P. lanceolata L. (107, 108) Ribwort Plantain Grassy places, dunes, roadsides and waste places. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR P. maritima L. (107, 108) Sea Plantain Salt marshes, sea-cliffs, dunes, rocks and pastures on mountains. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

DURNESS TONGUE

FARR

DURNESS TONGUE

DURNESS TONGUE

CLYNE LOTH

FARR

KILDONAN

P. coronopus L. (107, 108 Sandy and stony places			${ m t.}$
	DORNOCH GOLS	PIE CLYNE	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS TONG	UE FARR	
Littorella Berg.			
L. uniflora (L.) Aschers. Sandy and gravelly shore			
CREICH LAIRG	GOLS	PIE CLYNE	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS TONG	UE FARR	
CAMPANULAC	EAE		
Campanula L.			
C. latifolia L. (107) Giant Woods. Rare.	t Bellflower		
$Golspie\ (Dunrobin)$			
C. rapunculoides L. (107) Near gardens. Escape. Dornoch (Ferrytown) Kildonan (Kildonan)	Creeping Campu	nula or Cree	eping Bellflower
C. rotundifolia L. (107, 10 Pastures, banks, dunes, l CREICH LAIRG ROGART ASSYNT EDDRACHILLIS		PIE CLYNE	LOTH KILDONAN
Lobelia L.			
L. dortmanna L. (107, 10 Gravelly margins of lakes————————————————————————————————————	s. Common.	CLYNE	KILDONAN
RUBIACEAE Sherardia L.			
S. arvensis L. (107, 108) Fields. Occasional.	Field Madder		
CREICH — ROGART ASSYNT —	DURNESS TONG	UE ——	KILDONAN

# Galium L.

G. odoratum (L.) Scop. (107, 108) Woods Woods and shady banks. Occasional.	ruff
ROGART DORNOCH	KILDONAN
ASSYNT DURNESS TONG	FUE FARR
G. boreale L. (107, 108) Northern Bedstra Banks of streams. Frequent.	aw
CREICH LAIRG ROGART DORNOCH GOLS	PIE - KILDONAN
ASSYNT EDDRACHILLIS DURNESS -	
<b>G. mollugo</b> L. sub sp. <b>mollugo</b> (107) Grea Roadsides. Introduced. Rare.	t Hedge Bedstraw
LAIRG ROGART DORNOCH	KILDONAN
sub sp. erectum Syme. (107) Erect Hedge Golspie (Golspie, 1903, G.C.D.)	e Bedstraw
C T (10# 100) T 1 1 D 1 (	
<b>G. verum</b> L. (107, 108) Lady's Bedstraw Dry grassy places and dunes. Common.	
CREICH LAIRG ROGART DORNOCH GOLS	PIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONG	
ASSITT EDDITIONAL DESIGNATION	
G. saxatile L. (107, 108) Heath Bedstraw Grassy places and heaths. Common, wide	common d
CREICH LAIRG ROGART DORNOCH GOLS:	-
ASSYNT EDDRACHILLIS DURNESS TONG	
ASSINI EDDINACHILLIS DUNNESS TONG	TARK
G. sterneri Ehrend. (107, 108) Limestone On calcareous grassland on hills. Occasion	
	KILDONAN
ASSYNT EDDRACHILLIS DURNESS -	FARR
G. palustre L. (107, 108) Common Marsh- Marshes and ditches. Common, widesprea	
CREICH LAIRG ROGART DORNOCH GOLS:	
ASSYNT EDDRACHILLIS DURNESS TONG	
G. aparine L. (107, 108) Cleavers or Goose	egrass
Roadsides, waste places, shingle beaches.	
CREICH LAIRG ROGART DORNOCH GOLS	
ASSYNT EDDRACHILLIS DURNESS TONG	UE FARR
	7.00

#### CAPRIFOLIACEAE

Sambucus L.

S. ebulus L. (107) Dwarf Elder or Danewort At roadside. Introduced. Rare. Golspie (Golspie, 1962, M.McC.W.)

S. nigra L. (107, 108) Elder

Amongst scrub, roadsides and waste places. Always near houses.

Very sparse in the north and west. Introduced.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Viburnum L.

V. opulus L. (107, 108) Guelder Rose

Amongst scrub. Rare.

CREICH ——

ASSYNT EDDRACHILLIS DURNESS

Creich (Rosehall)

Assynt (Inchnadamph)

Eddrachillis (Glendhu)

Durness (Koeldale)

## Symphoricarpos Duham

S. rivularis Suksd. (107, 108) Snowberry

Garden escape.

Kildonan (Suisgill)

Tongue (Tongue)

#### Linnaea L.

L. borealis L. (107) Twinflower or Linnaea

In coniferous woods. Very rare.

GOLSPIE

Golspie (Golspie, 1888, J.G., 1960, J.A.)

#### Lonicera L.

L. periclymenum L. (107, 108) Honeysuckle

Woods, hedges. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### ADOXACEAE

Adoxa L.

A. moschatellina L. (108) Moschatel or Townhall Clock Assynt (Knockan, 1895, G.S.D.) No recent record.

#### VALERIANACEAE

Valerianella Mill.

Golspie (Strathsteven, 1888, J.G.)

#### Valeriana L.

V. officinalis L. (107, 108) Common Valerian
Ditches and amongst scrub. Common.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILL

DURNESS TONGUE

FARR

#### DIPSACACEAE

Knautia L.

ASSYNT EDDRACHILLIS

K. arvensis (L.) Coult. (108) Field Scabious Fields and dunes. Occasional.

DURNESS TONGUE FARR

#### Succisa Haller

S. pratensis Moench (107, 108) Devil's-bit Scabious

Damp pastures, heaths. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### COMPOSITAE

Senecio L.

S. jacobaea L. (107, 108) Common Ragwort
Pastures, dunes, waste places. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR
var. discoideus Koch. On the north coast.

		of streams.	Common.	CLYNE	LOTH	KILDONAN
	assy places. Freq	uent in the	e east, spar GOLSPIE	rse in no		west. KILDONAN
	us L. (107) Stick laces. Occasional		el or Stink	king Gro	undsel	
		DORNOCH	GOLSPIE		_	KILDONAN
Waste g	ris L. (107, 108) ( round, gardens, c LAIRG ROGART EDDRACHILLIS	ultivated to DORNOCH		CLYNE	LOTH	KILDONAN
Т	ussilago L.					
		es, banks,	GOLSPIE		LOTH	KILDONAN
P	etasites Mill.					
On road	(L.) Gaertn. (107 side. Garden esca ( <i>Dornoch</i> )		Butterbur			
F	ilago L.					
	nica (L.) L. (107 ths. Very rare.	) Common	Cudweed			
—— Clyne ( E				CLYNE		
	na (Sm.) Pers. (10	07) Slender	r Cudweed	or Sma	ll Cudwe	eed
Sandy h	eaths and fields.  LAIRG ROGART	Occasional DORNOCH		CLYNE	-	KILDONAN
	*******					

#### Gnaphalium L.

G. sylvaticum L. (107, 108) Heath or Wood Cudweed Heaths and woods. Frequent. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR G. supinum L. (107, 108) Dwarf Cudweed Bare places on mountain tops. Frequent. CREICH ASSYNT EDDRACHILLIS DURNESS TONGUE FARR G. uliginosum L. (107, 108) Marsh Cudweed Damp fields and heaths. Occasional. KILDONAN ASSYNT EDDRACHILLIS TONGUE FARR Antennaria Gaertn. A. dioica (L.) Gaertn. (107, 108) Mountain Everlasting or Cat's-foot Dry pastures, heaths, dunes and on mountains. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR Solidago L. S. virgaurea L. (107, 108) Goldenrod Dunes, pastures, banks and rocks. From sea-level to 3000 ft. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH ASSYNT EDDRACHILLIS DURNESS TONGUE Aster L. A. tripolium L. (107, 108) Sea Aster Salt-marshes, Occasional, CREICH KILDONAN DORNOCH GOLSPIE ASSYNT EDDRACHILLIS DURNESS TONGUE FARR Bellis L. **B.** perennis L. (107, 108) Daisy

DURNESS TONGUE

Grasslands, roadsides. Common, widespread. LAIRG ROGART DORNOCH GOLSPIE

EDDRACHILLIS

CREICH

ASSYNT

LOTH KILDONAN

CLYNE

FARR

#### Eupatorium L.

E. cannabinum L. (108) Hemp-agrimony Farr (Bettyhill, 1833, H.C.W.)

#### Anthemis L.

A. tinctoria L. (107) Yellow Chamomile On railway bank. Casual. Creich (Invershin, 1890, E.S.M. & F.J.H.)

#### Achillea L.

A. millefolium L. (107, 108) Yarrow
Fields, roadsides, dunes. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

A. ptarmica L. (107, 108) Sneezewort

Damp meadows, ditches. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

## Tripleurospermum Schultz Bip.

T. maritimum (L.) Koch (107, 108) Scentless Mayweed sub sp. maritimum Dunes, shingle beaches and sea-cliffs. Frequent. DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR sub sp. inodorum (L.) Hyland. ex Vaarama Fields and waste places. Frequent. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN DURNESS TONGUE FARR

#### Matricaria L.

M. recutita L. (107) Scented Mayweed or Wild Chamomile Railway bank. Casual. Golspie (Golspie, 1888, J.G.)

M. matricarioides (Less.) Porter (107, 108) Pineapple weed or Rayless Mayweed Waysides, waste places, fields. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Chrysanthemum L.

C. segetum L. (107, 108) Corn Marigold

In cultivated fields. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

C. leucanthemum L. (107, 108) Oxeye Daisy

Fields, waysides, dunes. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

C. parthenium (L.) Bernh. (107, 108) Feverfew

Roadsides, walls. Occasional.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

C. vulgare (L.) Bernh. (107, 108) Tansy

Waste places, near gardens. Occasional.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Artemisia L.

A. vulgaris L. (107, 108) Mugwort

Fields and waste places near the sea. Occasional.

---- DORNOCH GOLSPIE ---- KILDONAN
ASSYNT EDDRACHILIS DURNESS TONGUE FARR

A. absinthium L. (108) Wormwood

In old neglected garden.

Assynt (Achmelvich)

(220,000,000,000

#### Arctium L.

A. minus Bernh. Lesser Burdock

sub sp. nemorosum (Lejeune) Syme (107, 108)

Waste places. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

# Carduus L.

C. tenuiflorus Curt. (107) Waste places near the sea					
	DORNOCH	GOLSPIE			KILDONAN
C. nutans L. (108) Musk Casual (one plant) Assynt (Lochinver)	Thistle				
Cirsium Mill.					
C. vulgare (Savi) Ten. (1 Waste places, roadsides. CREICH LAIRG ROGART		widespread		LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS		FARR		
C. palustre (L.) Scop. (10 Marshes, ditches, wet wo CREICH LAIRG ROGART ASSYNT EDDRACHILLIS	ods. Comm	on, wides		LOTH	KILDONAN
C. arvense (L.) Scop. (10' Fields, waste places. Comercial Lairg Rogart Assynt Eddrachillis	mon.	GOLSPIE		LOTH	KILDONAN
C. heterophyllum (L.) Hill Wet places by streams, of CREICH ————————————————————————————————————	n banks ar	nd hills. Fi			- <del></del>
Saussurea DC.					
S. alpina (L.) DC. (107, 1  Mountain rocks and cliffs  CREICH ————————————————————————————————————		to 400 ft.			surea KILDONAN
Centaurea L.					
C. scabiosa L. (108) Great Fields and dunes. Occasion					
EDDRACHILLIS	DURNESS	TONGUE	FARR		

C. cyanus L. (107, 108) Cornflowe Cornfields. Rare. Extinct in v.c. 1			LOTH	KILDONAN
ASSYNT		FARR		
Assynt (Inchnadamph, 1899, G.E.	S.)			
Farr (Bettyhill, 1888, W.C.)				
C. nigra L. sub sp. nigra (107, 108 Lesser Knapweed	3) Common	Knapwe	ed or	
Waysides, fields. Common.				
CREICH LAIRG ROGART DORNOG	CH GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS DURNES	SS TONGUE	FARR		
Lapsana L.				
I communic I (107 108) Nimple				
L. communis L. (107, 108) Nipple Waysides, waste places and fields				
CREICH LAIRG ROGART DORNOG	_	CLYNE	LOTH	KILDONAN
	SS TONGUE	FARR	LOTH	RIEDONAN
	2011012	111111		
Hypochoeris L.				
H. radicata L. (107, 108) Cat's-ea	r			
Pastures, dunes, roadsides. Comm		read.		
CREICH LAIRG ROGART DORNOG		CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS DURNES	SS TONGUE	FARR		
Leontodon L.				
L. autumnalis L. (107, 108) Autu	mn Hawkbi	t		
Pastures, dunes, roadsides. Comm				
CREICH LAIRG ROGART DORNOG	CH GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS DURNES	SS TONGUE	FARR		
var. autumnalis. Roadsides and w			ıst.	
var. pratensis. Pastures in the nor				
var. simplex. Short coastal turf or	n the north	coast.		
I biguidass I (107) December 1	ls:4			
L. hispidus L. (107) Rough Hawk Pastures. Rare.	Dit			
ROGART				IZII DONAN
ROGARI				KILDONAN
Rogart (Rogart)				
Kildonan (Helmsdale)				

L. taraxacoides (Vill) Mérat (108) Hairy Hawkbit or Lesser Hawkbit On sandy ground. Rare. Eddrachillis (Sheigra, 1966, A.G.K.)

#### Tragopogon L.

Mycelis Cass.

M. muralis (L.) Dumort. (107) Wall Lettuce Roadside. Casual. Dornoch (Dornoch, 1966, J.A.)

#### Sonchus L.

S. arvensis L. (107, 108) Field Milk-Thistle or Perennial Sow-thistle Cultivated fields, wet sandy shores. Occasional.

CREICH —— DORNOCH GOLSPIE —— KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

S. oleraceus L. (107, 108) Smooth Sow-Thistle
Cultivated fields and waste places. Frequent.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

S. asper (L.) Hill (107, 108) Prickly Sow-thistle Cultivated fields, waste places. Frequent. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Hieracium L.

Sub-genus **Pilosella** (Hill.) S. F. Gray Section **Pilosellina** Pugsl.

H. pilosella L. (107, 108) Mouse-ear Hawkweed
Grassy places, banks, walls, heaths. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

var. concinnatum F. J. Hanb. (108)

Assynt (Knockan, 1958, M.McC.W., Inchnadamph, 1959, C.W., Culkein-Drumbeg, 1964, A.G.K.) Eddrachillis (Oldshoremore, 1964, A.G.K.) Durness (Balnakeil, 1959, C.W.) Farr (Farr Bay, 1959, C.W.)

var. tricholepium (Neag & Petes) Pugsl. (108)
Assynt (Inchnadamph, 1959, C.W., Culkein-Drumbeg, 1964, A.G.K.)

Sub-genus **Hieracium** Section **Alpina** Fries

H. holosericeum Backh. (107, 108)

Grassy slopes and rock-ledges at an altitude of 2500 ft or more. Creich (Ben More Assynt, 1827, R.G.)
Assynt (Inchnadamph, 1900, T.J.F., Glass Beinn, 1960, A.G.K.)
Durness (Ben Hope, 1888, J.C.M.)

**H. eximium** Backh. var. **tenellum** Backh. (Druce) (108) On rocky ledges over 2000 ft. Farr (Ben Klibreck, 1897, E.S.M.)

H. gracilentum Backh. (108) On rocky ledges or grassy slop

On rocky ledges or grassy slopes usually over 2500 ft.

Assynt (Canisp, 1890, E.S.M.)

Eddrachillis (Craig Riabbach and An Grianan, 1964, A.G.K.)

**H. globosiflorum** Pugsl. var. **globosiflorum** Pugsl. (108) On rocky ledges and grassy slopes usually over 2500 ft. Assynt (Canisp, 1890, E.S.M.)
Durness (Ben Hope, 1900, E.S.M.)

H. marginatum P. D. Sell & C. West (108) On rocky ledges usually over 2500 ft. Tongue (Ben Loyal, 1897, E.S.M.) Farr (Ben Klibreck, 1897, E.S.M.)

**H.** pseudocurvatum (Zahn) Pugsl. (108) On rocky ledges or grassy slopes usually over 2500 ft. Durness (Ben Hope, 1890, E.F.L.) Tongue (Ben Loyal, 1897, E.S.M.)

Section Subalpina Pugsl.

H. lingulatum Backh. ex Hook e Arnott (108)

Rocky ledges and stream sides over 2500 ft.

Assynt (Hills round Inchnadamph, 1908, E.S.M., 1957, R.C.P.)

Durness (Ben Hope, 1888, F.J.H., Foinaven and Carnstackie, 1964, A.G.K.)

Tongue (Ben Loyal, 1897, E.S.M., 1953, C.W.)

## H. hyparcticoides Pugsl. (108)

Rocky banks by streams.

Assynt (Hills and streams round Inchnadamph, 1890 & 1908, E.S.M., 1957, C.W.)

## H. callistophyllum F. J. Hanb. (107)

On stream sides and rocky ledges.

Creich (Oykell Bridge and Lubcroy, 1908, E.S.M.)

#### Section Cerinthoidea Fries

#### H. anglicum Fries (107, 108)

Rocky ledges, grassy banks and stream sides.

Dornoch (Cambusmore, 1962, M.McC.W.)

Assynt (Knockan, Inchnadamph, 1908, E.S.M.)

Durness (Koeldale, Ben Hope, 1953, M.C.F.P. & K.M.G.)

Tongue (Ben Loyal)

Farr (Farr Bay, 1951, C.W.)

#### H. hebridense Pugsl. (108)

Rocky streams, grassy banks and cliff-ledges. Assynt (Inchnadamph, 1899, C.E.S., 1908, E.S.M., 1950, C.W.) Durness (Ben Hope, H.W.P.)

## H. ampliatum (W. R. Linton) A. Ley (108)

Cliff-ledges and rocky streams.

Assynt (Lochinver, 1890, E.S.M., Inchnadamph, 1908, E.S.M.)

Eddrachillis (Craig Riabbach, 1964, A.G.K.)

Durness (Ben Hope, Loch Eriboll, 1964, A.G.K.)

Tongue (Tongue Bay, 1897, E.S.M.) Farr (Ben Klibreck, 1897, E.S.M.)

## H. langwellense F. J. Hanb. (107, 108)

Rocky banks of streams.

Creich (Streams round Oykell Bridge, 1908, E.S.M., 1953, C.W.)

Lairg (Lairg, H.W.P.)

Kildonan (Torrish, 1957, M.McC.W., Helmsdale, 1888, E.F.L.) Assynt (Streams round Inchnadamph, 1908, E.S.M.)

Durness (Ben Hope)

#### H. shoolbredii E. S. Marshall (108)

Rock-ledges and rocky banks of streams.

Assynt (Knockan, 1923, R.H.W., Elphin, Inchnadamph, 1899, C.E.S., 1908, E.S.M., 1950, C.W., 1956, R.A.G., Kulesku, 1890, F.J.H.)

Eddrachillis (Sandwood, 1957, M.McC.W., Craig Riabbach, 1964, A.G.K.)

Durness (Kearvaig & Koeldale, 1964, A.G.K., Durness, 1951, C.W., Smoo, 1923, R.H.W., 1951, C.W., Foinaven, 1964, C.W., Ben Hope, 1953, M.C.F.P.)

Tongue (Ben Loyal, 1897, E.S.M. & W.A.S., 1953, C.W.) Farr (Invernaver, 1886, E.S.M., Bettyhill, 1888, E.F.L., 1955, M.McC.W., Farr Bay, 1915, E.S.M., 1951, C.W.)

#### **H. iricum** Fries (107, 108)

Rock-ledges, rocky banks of streams and grassy slopes.

Creich (Oykell Bridge, 1953, C.W.)

Assynt (Knockan, Lochinver, Skiag Bridge, Stoer, Inchnadamph, 1956, R.A.G. & R.M.H.)

Durness (Durness, 1856, D.O., 1887, E.S.M., Balnakeil)

Tongue (Coldbackie)

Farr (Invernaver, 1891, E.S.M., Farr Bay, 1953, M.McC.W., Melvich, 1952, C.W. & J.W.C.)

#### Section Oreadea Zahn.

#### H. schmidtii Tausch (108)

Eddrachillis (Sandwood, 1960, A.G.K.)

Farr (Invernaver, 1886, E.S.M., Bettyhill, 1888, E.F.L., Farr Bay, 1952, C.W., Melvich, 1952, C.W.)

## **H.** nitidum Backh. (107, 108)

Rocky ledges.

Kildonan (Ben Griam, 1900, E.S.M.)

Assynt (Unapool, 1908, E.S.M., Inchnadamph, 1908, E.S.M.,

Culkein-Drumbeg, 1964, A.G.K.)

Eddrachillis (Badcall, 1885, F.J.H., Oldshoremore & Rhiconich, 1964, A.G.K.)

Durness (Ben Hope, 1900, E.S.M., 1888, F.J.H., Fashven, 1964, A.G.K.) Tonque (Tonque, 1901, E.S.M).

Farr (Invernaver, 1897, E.S.M., & W.A.S., Farr Bay, 1915, E.S.M., 1915, C.W., Melvich, 1897, E.S.M.)

## H. argenteum Fries (107, 108)

Rocky ledges, stream sides, grassy slopes and sand dunes.

Creich (Oykell Bridge, 1908, E.S.M.)

Golspie (Strathsteven, 1888, J.G., Golspie)

Clyne (Brora, 1897, E.S.M.)

Assynt (Knockan, 1894, G.C.D., Inchnadamph, 1897, E.S.M., Quinag, 1962, A.G.K.)

Eddrachillis (Sandwood, 1962, A.G.K.)

Durness (Ben Hope, 1888, F.J.H., Loch Hope, 1900, E.S.M., Durness, 1946, C.W.M.)

Tongue (Talmine, 1897, E.S.M., Tongue, 1897, E.S.M., Scullomie, 1900, E.S.M., Coldbackie, 1897, E.S.M., Skerray, 1900, E.S.M.)

Farr (Altnaharra, 1888 & 1915, E.S.M., Bettyhill, 1888, W.R.L., 1899, E.S.M., Farr Bay, 1951, C.W., Armadale, 1915, E.S.M., Kirtomy, Melvich, 1951, C.W., Strathy, 1956, J.A.)

#### H. scoticum F. J. Hanb. (108)

Rocky ledges and grassy banks.

Assynt (Inchnadamph, 1908, W.A.S.)

Tongue (Skerray, 1900, W.A.S.)

Farr (Farr Bay, 1897, W.R.L., 1951, C.W., Kirtomy, 1897, E.S.M., Armadale, 1888, W.R.L., Strathy, 1888, J.C.M., 1915, E.S.M., Melvich, 1915, F.J.H., 1951, C.W.)

Section Suboreadea Pugsl.

# H. jovimontis (Zahn) Roffey (108)

Rocky ledges and banks.

Eddrachillis (Oldshoremore, 1964, A.G.K.)

Durness (Heilam Ferry, F.J.H.)

Farr (Altnaharra & Bettyhill, T.J.F.)

## H. saxorum (F. J. Hanb.) Sell & West (107, 108)

Rocky ledges and stream sides. Dornoch (Mound, 1962, M.McC.W.)

#### H. dicella Sell & West (107, 108)

Tongue (Kinloch, 1897, E.S.M.)

Limestone rocks.

Dornoch (Cambusmore, 1962, M.McC.W.)

Assynt (Inchnadamph, 1956, R.A.G. & R.M.H.)

Durness (Durness, 1956, J.A., Smoo, 1951, C.W.)

## H. sarcophylloides Dahlst. (108)

Limestone cliffs.

Durness (Smoo, 1900, E.S.M., Seamraig, 1964, A.G.K.) Farr (Altnaharra, 1888, J.C.)

Section Vulgata F. N. Williams

#### H. prolixum Noorlin (108)

Rocky ledges and sandhills.

Durness (Ben Hope, 1900, E.S.M.)

Tongue (Achininver, 1897, E.S.M.)

#### H. subtenue (W. R. Linton) Roffey (107, 108)

Rocky ledges and stream sides.

Creich (Streams round Oukell Bridge, 1908, W.A.S.)

Eddrachillis (Craig Riabbach, 1964, A.G.K.)

Assynt (Stoer, 1956, R.A.G., Canisp, 1899, C.E.S., Inchnadamph, 1908, E.S.M.

Durness (Ben Hope, 1900, E.S.M., Fashven, 1964, A.G.K.)

Tongue (Ben Loyal, 1900, E.S.M.)

#### H. aggregatum Backh. (108)

Rocky ledges.

Tongue (Skerray, E.S.M.) fide Pugsl.

## H. camptopetalum (F. J. Hanb.) Sell & West (108)

Rocky stream sides and cliffs.

Assynt (Kylesku, 1908, E.S.M., Inchnadamph, 1908, E.S.M., 1951, C.W.) Durness (Streams by Ben Hope, 1888, J.C.M., 1952, C.W.)

#### H. duriceps F. J. Hanb. (107, 108)

Rocky cliffs, stream sides and grassy banks.

Creich (Oykell Bridge, 1952, C.W.)

Assynt (Inchnadamph, 1890, E.S.M.)

Farr (Altnaharra, 1888, F.J.H., Ben Klibreck, 1897, E.S.M., Bettyhill & Farr Bay, 1910, E.S.M.)

#### H. pollinarium F. J. Hanb. (108)

Rocky ledges.

Farr (Strathnaver, 1888, J.C.M., Invernaver, 1886, F.J.H., Farr Bay, 1915, E.S.M.)

## **H. pictorum** E. F. Linton (107, 108)

Rocky cliffs and stream sides.

Creich (Oykell Bridge, 1908, E.S.M.)

Tongue (Ben Loyal, 1900, E.S.M.)

## H. pollinarioides Pugsl. (108)

Limestone rocks.

Assynt (Inverkirkaig, 1944, A.J.W., Lochinver, 1890, E.S.M., 1944, A.J.W., Stoer, 1956, R.A.G., Clashnessie, 1956, R.A.G.)

Eddrachillis (Oldshoremore, 1964, A.G.K.)

Durness (Smoo, 1923, R.H.W., 1958, U.K.D., Balnakeil, 1959, C.W., Durness, 1900, E.S.M.)
Farr (Bettyhill, 1953, M.McC.W.)

#### H. variicolor var. piligerum Pugsl. (108)

Rocky cliffs and stream sides.

Assynt (Culag, 1956, R.A.G., Inchnadamph, E.S.M.) Durness (Ben Hope, 1900, E.S.M.)

#### H. dipteroides Dahlst. (108)

Rocky cliffs and stream sides.

Assynt (Beinn Garbh, 1908, W.A.S.)

### H. rivale F. J. Hanb. (107, 108)

Rocky cliffs and stream sides.

Kildonan (Ben Griam Mor, 1963, M.McC.W.)

Assynt (Inchnadamph, 1890, F.J.H., 1908, E.S.M.)

Eddrachillis (Craig Riabbach, 1964, A.G.K.)

Durness (Carnstackie & Beinn Spionnaidh, 1964, A.G.K.)

#### H. euprepes F. J. Hanb. (108)

Rocky places, sand dunes and grassy banks.

Assynt (Stoer, 1956, R.A.G.)

Eddrachillis (Cnoc na Glaic Torsain, 1964, A.G.K.)

Durness (Balnakeil, 1953, M.C.F.P., Carnstackie & Farrmheal, 1964, A.G.K.)

Tongue (Tongue Ferry, 1897, E.S.M. & W.A.S., 1900, E.S.M.)

Farr (Invernaver, 1888, W.R.L., Armadale, 1915, E.S.M., Melvich, 1897, E.S.M., Bettyhill, 1897, W.A.S.)

#### H. vennicontium Pugsl. (108)

Rocky stream sides.

Assynt (Ben Garbh, 1908, E.S.M.)

## H. caesiomurorum Lindeb. (108)

Grassy banks and rocky stream sides.

Creich (1908, E.S.M.)

Assynt (Clachtoll, 1952, D.McC., Inchnadamph, 1900, C.E.S.)

Durness (Smoo, 1964, A.G.K.)

Tongue (Tongue & Ben Loyal, 1900, E.S.M.)

Farr (Forsinard, 1964, A.G.K.)

## H. rubiginosum F. J. Hanb. (108)

Rocky stream sides.

Eddrachillis (Craig Ribbach & Rhiconich, 1962, A.G.K.)

## H. cravoniense (F. J. Hanb.) Roffey (107, 108) Grassy and rocky places.

Creich (Oykell Bridge, F.J.H.) Dornoch (Torboll, 1955, J.A.) Tonque (Ardskinid, 1900, E.S.M.)

Farr (Farr Bay, 1951, C.W.)

#### H. fulvocaesium Pugsl. (108)

Grassy banks.

Farr (Bettyhill, 1887, E.S.M., 1953, J.E.R.)

## H. proximium F. J. Hanb. (108)

Sandhills.

Tongue (Melness, 1897, E.S.M. & W.A.S.)

## H. caledonicum F. J. Hanb. (108)

On rocky ledges and stream sides.

Assynt (Lochinver & Canisp, 1890, E.S.M., Inchnadamph, 1887, E.S.M., 1908, E.S.M. & W.A.S., 1951, C.W.)

Durness (Balnakeil, 1948, M.McC.W., Fashven, Inshore, Kearvaig, 1964, A.G.K.)

Tonque (Ben Loyal, Melness, Tonque, 1897, E.S.M., Coldbackie, 1900, E.S.M.

Farr (Altnaharra, 1888, F.J.H., Strathnaver, 1888, J.C.M., Bettyhill, Kirtomy, Melvich, 1897, E.S.M., Farr Bay, 1915, E.S.M., Strathy, 1915, E.S.M.

## **H. vulgatum** Fries (107, 108)

On rocks, grassy places, walls and dunes. Creich (Oykell Bridge, 1952, C.W. & J.W.C.)

Golspie (Golspie, 1950, C.W.)

Clyne (Brora, 1950, C.W. & J.W.C.)

Kildonan (Ord., 1960, J.A.)

Assynt (Inchnadamph & Kylesku, 1908, E.S.M., Knockan, 1958, M.McC.W., Lochinver, Stoer & Clashnessie, 1956, R.A.G. & R.M.H., Loch Assynt, 1953, P.F.Y., Achmelvich, 1955, J.A., 1943, A.J.W.) Tongue (Melness, 1897, E.S.M.) Farr (Bettyhill, 1886, E.S.M., 1953, C.W. & J.W.C.)

## H. angustisquamum (Pugsl.) Pugsl. (108)

On limestone.

Assynt (Ledmore, 1964, A.G.K.)

Section Alpestria Fries

#### H. dovrense Fries (108)

Rocky ledges.

Eddrachillis (Rhiconich, 1964, A.G.K.)

Tongue (Ben Loyal, 1897, E.S.M., 1953, J.E.R.)

#### Section Tridentata Fries

#### H. sparsifolium Lindeb. (107, 108)

Grassy banks and rocky places.

Creich (Oykell Bridge, 1890, E.S.M., 1956, C.W.)

Assynt (Inchnadamph, 1923, R.H.W.)

Eddrachillis (Laxford Bridge)

Durness (Kearvaig, 1964, A.G.K.)

Tongue (Tongue, 1953, M.McC.W.)

#### Section Foliosa Pugsl.

#### H. latobrigorum (Zahn) Roffey (107, 108)

Grassy banks and rocks.

Creich (Bonar Bridge, H.W.P., Oykell Bridge, 1953, C.W.)

Clune (Strath Brora, 1897, W.A.S.)

Durness (Koeldale, 1964, A.G.K.)

Tongue (Tongue, H.W.P.)

Farr (Altnaharra, 1887, E.S.M., Strathnaver, 1957, J.A., Bettyhill, 1952, C.W., Farr, 1856, D.O., Armadale, Strathy, 1953, C.W., Melvich, 1953, C.W.)

## H. subcrocatum (E. F. Linton) Roffey (107, 108)

Grassy places and banks of streams.

Clyne (Brora, 1957, M.McC.W.)

Assynt (Inverkirkaig, Achmelvich, 1944, A.J.W. & M.S.C.)

Farr (Bettyhill, 1954, J.E.R.)

## H. strictiforme (Zahn) Roffey (108)

Grassy places and banks of streams.

Assynt (Inverkirkaig, 1944, A.J.W. & M.S.C., Inchnadamph, 1953, C.W.)

Durness (Inshore, Geodha Sligeach, 1964, A.G.K.)

Tongue (Melness, Tongue, Coldbackie, 1897, E.S.M.)

Farr (Altnaharra, 1889, W.F.M., 1897, E.S.M.)

## H. reticulatum Lindeb. (107, 108)

Rocky banks of streams and grassy places.

Creich (Oykell Bridge, 1953, C.W.)

Tongue (Tongue, 1897, E.S.M., Skerray, 1959, C.W.)

Farr (Altnaharra, 1887, E.S.M., Bettyhill, 1951, C.W., Strathy, 1915, E.S.M., 1951, C.W.)

H. maritimum (F. J. Hanb.) F. J. Hanb. (108) Grassy banks and sandy places. Tongue (Skerray, 1900, E.S.M.) Farr (Melvich, 1887, E.S.M., 1951, C.W.)

Section Umbellata F. N. Williams

H. umbellatum L. (108) sub sp. umbellatum Grassy and sandy places. Farr (Farr Bay, 1827, R.G.)

#### Crepis L.

C. capillaris (L.) Wallr. (107, 108) Smooth Hawk's-beard Pastures, dunes, waste places. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

C. paludosa (L.) Moench (107, 108) Marsh Hawk's-beard

Wet grassy places. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Taraxacum Weber

T. officinale Weber. (107, 108) Common Dandelion Fields, waste places. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR T. palustre (Lyons) DC. (107, 108) Narrow-leaved Marsh Dandelion Marshes. Frequent. CREICH LAIRG DORNOCH GOLSPIE KILDONAN CLYNE LOTH TONGUE FARR T. spectabile Dahlst. (107, 108) Broad-leaved Marsh Dandelion Bogs. Frequent. KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR T. laevigatum (Willd.) DC. (107, 108) Lesser Dandelion Heaths and sandy ground. Frequent. DORNOCH GOLSPIE CLYNE ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

# MONOCOTYLEDONES JUNCAGINACEAE Triglochin L.

T. nalustris L. (107, 108) Marsh Arroworass

-	,	,	s. Common	0			
CREICH	LAIRG	ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONA
ASSYNT	EDDRAG	CHILLIS	DURNESS	TONGUE	FARR		
T. marit			Sea Arrov	vgrass			
			DORNOCH	GOLSPIE		-	KILDONA
ASSYNT	EDDRAG	CHILLIS	DURNESS	TONGUE	FARR		
		RACEAE					
Z	ostera I	4.					
		7, 108) H					
In the s	ea near l	low water	. Very rar	e.			
				GOLSPIE			
ASSYNT				-			
		leet, 1888,					
Assynt (	Oldany,	1955, B.	F.				
Z angu	stifolia (	Hornem	Reichb. (	107 108)	Narrow-	leaved :	Folorace
		s. Very ra		107, 100)	Liation-	icuvca .	120181 0000
				GOLSPIE			
				TONGUE	FARR		
Golsnie	Loch F.	leet 1897	E.S.M., 1				
			1900, E.S.				
1 ongue	(Hyte of	1 ongue,	1000, 12.0.	111.)			
			warf Eelg	rass			
Muday	estuaries	s. Very ra	re.				
				GOLSPIE			
$\overline{Golspie}$	$(Loch\ F)$	leet, 1897,	E.S.M. d	W.A.S.)	Obs. aller		
р	ОТАМ	OGETOR	NACEAE				
	otamoge		THO EITE				
1	oumoge	JUJII II.					
P. natan	s L. (10	7, 108) B	road-leave	d Pondwe	ed		
		ns Frequ					

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

P. polygonifolius Pourr. (107, 108) Bog Pondweed
Peaty pools in bogs and moors. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR
P. lucens L. (108) Shining Pondweed
Assynt (Recorded by A. Gray, 1886)
P. gramineus L. (108) Various-leaved Pondweed
Lochs and lochans. Occasional.
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR
Assynt (Loch Awe, 1886, A.G., 1890, E.S.M., Stoer, 1944, A.J.W. &
M.S.C.)
Durness (Durness, 1881, W.F.M.)
Tongue (Lochs Modsarie, Craisg, Hakel & Dubh, 1948, G.T.)
Farr (Loch Naver, 1888, F.J.H. & J.C.M.)
P.×nitens Weber (108)
Lochs and lochans. Rare.
ASSYNT EDDRACHILLIS — TONGUE —
Assynt (Lochinver, 1886, A.G., Loch an Aigeil, 1944, A.J.W. & M.S.C.)
Eddrachillis (Scourie, 1885, H.E.F. & F.J.H.)
Tongue (Loch Modsarie, 1948, G.T.)
P. alpinus Balb. (108) Red Pondweed
Lochans. Rare.
ASSYNT — TONGUE —
Assynt (Loch an Aigeal, 1948, A.J.W. & M.S.C.)
Tongue (Loch Slaim, 1948, G.T.)
P. praelongus Wulf. (108) Long-stalked Pondweed
In lochs. Rare.
CREICH — — — — — —
ASSYNT —— DURNESS —— ——
Creich (Loch Sail, 1969, U.K.D.)
Assumt (Loch Mgol a Choire 1936, J.E.L. Gillargo Loch 1890, E.S.M.)

**P. perfoliatus** L. (107, 108) Perfoliate Pondweed In lochs. Occasional.

Durness (Loch Borralie, 1948, G.T.)

CREICH —
ASSYNT EDDRACHILLIS DURNESS TONGUE
Creich (Bonar Bridge, 1842, J.S., Loch Sail, 1969, U.K.D.)
Assynt (Loch Awe, 1886, A.G., 1890, F.J.H. & E.S.M., Loch Borralan
1886, A.G., Loch an Ordain & Loch Bad na Muirichinn, 1944, A.J.W.
& M.S.C.)
Durness (Loch Croispol & Borralie, 1948, G.T., 1881, W.F.M.)
Tongue (Lochs Modsarie & Craisg, 1948, G.T.)
P.×cognatus Aschers. & Graebn. (108)
Lochs. Very rare.
DANIEL CO.
DURNESS —
Durness (Loch Borralie, 1948, G.T.)
P. berchtoldii Fieb. (108) Small Pondweed
In lochs. Rare.
ASSYNT
Assynt (Loch an Aigeil, 1944, A.J.W. & M.S.C.)
T (100) (1 1 T )
P. crispus L. (108) Curled Pondweed
Lochs. Rare.
EDDRACHILLIS — — —
Eddrachillis (Sandwood)
Edulation (Sunaviood)
D 61:6
P. filiformis Pers. (108) Slender-leaved Pondweed
In lochs. Rare.
ASSYNT — DURNESS — —
Assynt (Loch Urigill, 1886, W.F.M., Loch an Aigeil, 1944, A.J.W. &
M.S.C.)
Durness (Loch Caladail, 1885, H.E.F. & F.J.H., Loch Borralie, 1948,
G.T.)
P. pectinatus L. (108) Fennel Pondweed
In lochs. Rare.
DURNESS ——
Durness (Loch Borralie, 1948, G.T.)

# RUPPIACEAE

In woods and amongst scrub. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE

ASSYNT EDDRACHILLIS

Ruppia L.

R. maritima L. (107) Beaked Tasselweed or Tassel Pondweed In salt-marsh. Very rare. GOLSPIE Golspie (Little Ferry, 1962, M.McC.W.) LILIACEAE Tofieldia Huds. T. pusilla (Michx.) Pers. (108) Scottish Asphodel Marshes and by springs on hills. Rare. ASSYNT -DURNESS Assynt (Inchnadamph) Durness (Durness, Ben Hope) Narthecium Huds. N. ossifragum (L.) Huds. (107, 108) Bog Asphodel Bogs and wet heaths. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR. Ornithogalum L. O. umbellatum L. (107) Star-of-Bethlehem Introduced. Clyne (Brora) Scilla L. S. verna Huds. (108) Spring Squill Grassy turf near the sea. Occasional on the north coast. DURNESS TONGUE EDDRACHILLIS Endymion Dumort. E. non-scriptus (L.) Garcke (107, 108) Bluebell or Wild Hyacinth

DURNESS TONGUE

CLYNE LOTH KILDONAN

FARR

## TRILLIACEAE

Paris L.

P. quadrifolia L. (108) Herb-Paris
Assunt (Islet in Loch Awe. 1895, G.C.D.)

#### JUNCACEAE

Juneus L.

J. squarrosus L. (107, 108) Heath Rush

Heaths and moors. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

J. tenuis Willd. (108) Slender Rush Bare place by paths. Rare.

ASSYNT EDDRACHILLIS DURNESS

Assynt (Lochinver)

Eddrachillis (Kylesku) Durness (Durness)

J. gerardii Lois. (107, 108) Saltmarsh Rush or Mud Rush

Salt-marshes. Frequent.

CREICH — DORNOCH GOLSPIE — KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

J. trifidus L. (107, 108) Three-leaved Rush

Rock-ledges and stony places on many western hills. Ascends to 3000 ft. Occasional.

CREICH -

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

J. bufonius L. (107, 108) Toad Rush

Roadsides, paths, muddy places. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

ASSYNT EDDRACHILLIS DURNESS TONGUE FARE

J. effusus L. (107, 108) Soft Rush

Wet pastures, bogs. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

J. conglomeratus L. (107, 108) Compact Rush Wet pastures, bogs. Common, widespread.

CREICH	LAIRG	ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT	EDDRA	CHILLIS	DURNESS	TONGUE	FARR		
T halting	337:11.2	/107 10	0 \ Dal4; a 1	Durah			
		(101, 10 casional.	8) Baltic I	wasn			
Dulle sia	LCKS. OC	casionai.	DORNOCH	COLSPIE			
	EDDRAG	сипла	DURNESS		FARR		
	HDDIM		D01011200	10110011			
J. acutifl	lorus Eh	rh. ex Ho	offm. (107,	108) Shar	p-flower	ed Rush	
			woods. F		-		
CREICH			DORNOCH	GOLSPIE			KILDONAN
ASSYNT	EDDRAG	CHILLIS	DURNESS	TONGUE	FARR		
			) Jointed				
			ommon, w	~			
CREICH			DORNOCH		CLYNE	LOTH	KILDONAN
ASSYNT	EDDRAG	CHILLIS	DURNESS	TONGUE	FARR		
J alnino	articula	tus Chaix	(108) Alp	ine Rush			
			ins. Rare.	ino rusii			
				-			
ASSYNT				TONGUE			
Assynt (	Inchnad	amph, 18	87, E.S.M.				
		yal, R.M.		,			
			Bulbous R				
	-		and wood			-	
CREICH			DORNOCH		CLYNE	LOTH	KILDONAN
ASSYNT	EDDRAG	CHILLIS	DURNESS	TONGUE	FARR		
J. kochii	F W S	Schultz (1	07 108)				
			ds to 2000	ft Occasi	onal in	west	
	LAIRG						
ASSYNT	EDDRAG	HILLIS	DURNESS		FARR		
			estnut Ru				
Marshes	and spr	ings. 2500	ft. Very 1	rare.			
CREICH				<u> </u>			
Creich (1	Ben Mor	e Assynt,	1960, D.A	R.			
I bigh	.:. T /1	07 \ T	d become	an orla			
			lowered R				
CREICH	aces on	mus at 20	500 ft. Ver	y rare.			
CREICH							
		_					

J. triglumis L. (107, 108) Three-flowered Rush Wet rock-ledges on mountains. Occasional. CREICH ----ASSYNT EDDRACHILLIS DURNESS . Creich (Ben More Assynt, 1827, R.G., 1959, D.A.R.) Assynt (Conival, 1886, A.G., 1890, E.S.M.) Durness (Ben Hope, 1957, R.E.C.F.) Luzula DC. L. pilosa (L.) Willd. (107, 108) Hairy Wood-rush Woods. Frequent in east, sparse in west. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT DURNESS TONGUE FARR L. sylvatica (Huds.) Gaudin. (107, 108) Great Wood-rush Woods, shady rocky places by streams. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN EDDRACHILLIS ASSYNT DURNESS TONGUE FARR L. spicata (L.) DC. (107, 108) Spiked Wood-rush Rocky ledges on many western hills. Occasional. CREICH LAIRG KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR Creich (Ben More Assynt) Lairy (Ben Hee) Kildonan (Ben Griam) L. arcuata Sw. (107, 108) Curved Wood-rush Stony ground on mountains, about 3000 ft. Very rare. CREICH DURNESS -Creich (Ben More Assynt, 1824, R.G., 1899, C.E.S.) Durness (Foinaven, summit, 1824, R.G.) L. campestris (L.) DC. (107, 108) Field Wood-rush Grassy places. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

L. multiflora (Retz.) Lejeune (107, 108) Heath Wood-rush or

Many-headed Wood-rush

Heaths, woodland. Common, widespread.

CREICH	LAIRG	ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT	EDDRAG	CHILLIS	DURNESS	TONGUE	FARR		
	MADV	LLIDA	TEAT				
	Illium L		EAL				
μ.	illulli 12	•					
			Ramsons				
Damp v			es. Occasio				
		ROGART	DURNESS	GOLSPIE	TADD		
ASSYNT	EDDKA	CHILLIS	DOKNESS	TONGUL	FARR		
I	RIDAC	EAE					
I	ris L.						
		. (105 1(	00 \ 37 11	T ' 37	. 11		
			98) Yellow sides. Cor		enow ra	ag	
CREICH	-	ROGART			CLYNE	LOTH	KILDONAN
ASSYNT	EDDRA	CHILLIS	DURNESS	TONGUE	FARR		
	~	TD1 1					
,	Crocosmi	a Planch.					
$\mathbf{C}. imes\mathbf{cro}$	cosmiflo	ra (Lemo	ine) N. E.	Br. (107, 1	108) Mo	ntbretia	
		casional.			,		
				GOLSPIE	CLYNE	<del></del> ,	KILDONAN
ASSYNT	EDDRA	CHILLIS			FARR		
	ореші	DACEA	E.				
		nthera Ri					
	F						
		.) Fritsch	(108) Narı	row-leaved	or Lon	g-leaved	Helleborine
Woods	. Rare.						
ASSYNT	,						
		irkaig & .	Lochinver)				
	Epipacti	s Sw.					
E, hell	eborine (	L.) Crant	z. (108) B	road-leave	d Hellel	orine	
Woods		Li, Ciant	L. (100) D.	1000-1000	a mono	Jornio	
ASSVNI	-			TOXOTTE			

E. atrorubens (Hoffm.) Schult. (108) Dark-red Helleborine

Assynt (Achmelvich)

Tongue (Melness & Tongue)

Limestone rocks and screes. Occasional.
ASSYNT — DURNESS TONGUE FARR  Assynt (Inchnadamph)  Durness (Koeldale & Smoo)  Tongue (Melness)  Farr (Invernaver)
Listera R. Br.
L. ovata (L.) R. Br. (107, 108) Common Twayblade  Damp sandy pastures. Frequent.  CREICH — DORNOCH — KILDONAN  ASSYNT EDDRACHILLIS DURNESS TONGUE FARR
L. cordata (L.) R. Br. (107, 108) Lesser Twayblade Pine woods and moorland under heather. Sparsely but widely distributed. Frequent.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR
Goodyera R. Br.
G. repens (L.) R. Br. (107, 108) Creeping Lady's-tresses Pine woods. Occasional.  CREICH DORNOCH GOLSPIE
Hammarbya Kuntze
H. paludosa (L.) Kuntze (107, 108) Bog Orchid In wet moss on moors and in bogs. Rare.  CREICH LAIRG — — — — — — — — — — — — — — — — — — —

# Coeloglossum Hartm.

C. viride (L.) Hartm. (107, 108) Frog Orchid

Sandy pastures by	the sea. Freque	ent.			
	DORNOC	H GOLSPIE			
ASSYNT EDDRACH	ILLIS DURNES	S TONGUE	FARR		
Gymnadenia	R. Br.				
C (T) T	D (105 100)	T7	1.1.1		
G. conopsea (L.) R	. Br. (107, 108)	Fragrant O	renia		
sub sp. conopsea Grassland and hea	the Frequent				
CREICH LAIRG -	-	H GOLSPIE	LOTH	KILDONAN	
ASSYNT EDDRACH			FARR	KILDONAN	
ASSINI EDDIAGI	ILLIS DUNNES	5 TONGUL	rann		
Leucorchis	E. Mey				
L. albida (L.) E. M	lev. ex schur (1	07, 108) Sma	ll white Orchid	l	
Pastures. Frequen		.,,			
CREICH LAIRG -					
ASSYNT EDDRACH	ILLIS DURNES	S TONGUE	FARR		
Platanthera	Rich.				
P. chlorantha (Cus Wet pastures. Occ CREICH LAIRG —		07, 108) Grea	ater Butterfly-o	rchid	
ASSYNT EDDRACH	ILLIS DURNES	S TONGUE	FARR		
P. bifolia (L.) Rich Wet pastures. Free		ser Butterfly	-orchid		
CREICH LAIRG R	OGART DORNOC	H GOLSPIE	CLYNE —		
ASSYNT EDDRACH	ILLIS DURNES	S TONGUE	FARR		
Orchis L.					
0. mascula (L.) L. Pastures. Frequent		y-purple Ore	ehid		
-	OGART DORNOC	H	CLYNE	***************************************	
ASSYNT EDDRACH	ILLIS DURNES	S TONGUE	FARR		
Dactylorchis	s (Klinge) Vern	ieul.			
<b>D. fuchsii</b> (Druce) Vermeul. (107, 108) Common Spotted-orchid Damp meadows. Frequent.					
R	OGART DORNOC	H GOLSPIE			
ASSYNT EDDRACH	ILLIS DURNES	S TONGUE	FARR		

	lata (L.) Vermeu eaths and moors.				orchid	
CREICH ASSYNT	LAIRG ROGART EDDRACHILLIS	DORNOCH		CLYNE FARR	LOTH	KILDONAN
Early M	nata (L.) Vermeu arsh-orchid				or	
	, damp pastures i		-			
ASSYNT	LAIRG ROGART EDDRACHILLIS			CLYNE FARR	LOTH	KILDONAN
Norther	urella (T. & T. A n Marsh-orchid o ssy places. Frequ	r Dwarf Pı			108)	
CREICH	LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS		FARR		
	arsh-orchid occidentalis (Pug s. Rare. ————————————————————————————————————	sl.) P. F. H	Iunt & Su	mmerha	yes (108	)
				FARR		
Farr ( $I$	Melvich)					
_	LEMNACEAE Lemna L.					
	or L. (107) Comm ds. Rare.					
	ROGART	DORNOCE	I ——		LOTH	
	—— (Rogart, 1959, M h (Dornoch, 1955	,				
	Glen Sletdale, 1962	,				
	CT 4 T C 4 T 4 C					
	SPARGANIAC	EAE				
	Sparganium L.					
	tum L. (107, 108) ns. Occasional.	Branched	Bur-reed			
	— ROGAR	т —	GOLSPIE		/ <del></del>	KILDONAN
		DURNES	s —	FARR		
S. eme	ersum Rehm. (108	) Unbranc	hed Bur-r	reed		

Lochans. Rare.					
ASSYNT ——			FARR		
S. angustifolium Michx. (Lochs. Occasional.	107, 108) 1	Floating B	ur-reed		
ROGART	DORNOCH				
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
S. minimum Wallr. (107, Lochans. Occasional.	108) Least	Bur-reed	or Smal	l Bur-re	ed
CREICH LAIRG ROGART					KILDONAN
ASSYNT EDDRACHILLIS		TONGUE	FARR		
TYPHACEAE Typha L.					
T. latifolia L. (107) Bulru In a pond. Rare.	ash or Grea	ıt Reedma	ice		
	DORNOCH				
Dornoch (Dornoch, 1955,	$\overline{J.A.}$				
CYPERACEAE Eriophorum L.					
E. angustifolium Honek. Bog pools. Common, wid		Common	Cottongr	ass	
CREICH LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
E. latifolium Hoppe (107 Wet places on basic soil.			Cottongr	ass	
CREICH LAIRG	DORNOCH				<del></del>
ASSYNT EDDRACHILLIS	-	TONGUE			
E. vaginatum L. (107, 10) Wet places on heaths and				d.	,
CREICH LAIRG ROGART ASSYNT EDDRACHILLIS		GOLSPIE		LOTH	KILDONAN
Seirnus I.					

Scirpus L

S. caespitosus L. (107, 108) Deergrass Wet heaths. Common, widespread.

CREICH ASSYNT	LAIRG ROGAR EDDRACHILLIS			CLYNE FARR	LOTH	KILDONAN
C looned	wia T /107 100	\ Camman (	Vlask made	on Dulma	, h	
	ris L. (107, 108 Occasional.	) Common C	nub-rusii (	or Duirus	811	
CREICH				CLYNE		KILDONAN
ASSYNT	EDDRACHILLIS		TONGUE	FARR	,	KILDONAN
11001111			1011001	2 111111		
	eus L. (107, 108 are places. Fred		b-rush			
CREICH	LAIRG ROGAR	T DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS		TONGUE	FARR		
S. fluitans L. (108) Floating Club-rush or Floating Spike-rush Marshes and lochans. Frequent near north and west coasts.						
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
E	leocharis R. Br	•				
	**					
	ueflora (F. X. I		Schwarz (	107, 108	)	
	vered Spike-rus					
	eaty places on r					
CREICH	LAIRG ROGAR			CLYNE		KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
E. multic	eaulis (Sm.) Sm	. (107, 108)	Many-stal	lked Spik	ce-rush	
	ty places in bog			aroa spir	-0 - 0.01	
CREICH	LAIRG —					
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
E. palustris (L.) Roem. & Schult. (107, 108) Common Spike-rush Margins of lochs. Common.						
CREICH		r DORNOCH	COLEDIE	CLYNE	TOTAL	KILDONAN
	EDDRACHILLIS	DURNESS		FARR	LOIH	RILDONAN
ASSINI	EDDIACHILLIS	DUMESS	TONGOL	FAILI		
E. uniglumis (Link) Schult. (107, 108) Slender Spike-rush Marshes near the sea. Rare.						
		DORNOCH				
ASSYNT	EDDRACHILLIS		TONGUE	FARR		
	Inverkirkaig, L	ochinver)				
Eddrachillis (Laxford Bridge)						
	Melness)	,				
	vernaver, Altna	harra, Melvi	ch)			
3.50						

# Blysmus Panz.

Saltmar	(Huds.) Link (10 sh Flat-sedge alt marshes. Free		arrow Bly	smus or		
Grassy s	an maisnes, rice	-				
ASSYNT	EDDRACHILLIS	DORNOCH DURNESS		FARR		
S	choenus L.					
	ans L. (107, 108) eaty places. Com- LAIRG ROGART EDDRACHILLIS	mon.	GOLSPIE	CLYNE FARR	LOTH	KILDONAN
R	<b>hynchospora</b> Vah	1				
	L.) Vahl (107, 10 ty places. Occasio		Beak-sedg	e 		KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
Cl	adium Browne					
	ty pool. Rare.	8) Great F	en-sedge o	or Saw S	edge	
Eddrachi	EDDRACHILIS Illis (between Kyle	 estrome &	Badcall)			
Ca	arex L.					
C. laeviga Marshes.	ata Sm. (107, 108 Rare.	) Smooth-	stalked Se	dge		WII DOW AND
Eddrachi Kildonan	EDDRACHILLIS Ulis (Loch Laxford (Kildonan, 1956	d, 1955, A.  G, Torrish,	S., Handa 1962, M.I	Is., 195 McC.W.)	53, H.H.	)
	s L. (108) Distan	9				
	EDDRACHILLIS llis (Kinlochbervi (Balnakeil, 1948,			FARR McC.W.)		

	na DC. (107, 108 wet pastures and					
CREICH	LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
	is Sm. (107, 108) and moors. Comm LAIRG ROGART EDDRACHILLIS		oread.	CLYNE	LOTH	KILDONAN
C. lepido	carpa Tausch (10	7, 108) Lo	ng-stalked	Yellow	Sedge	
	ths. Frequent.					
						KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
Stony pl	sa Hornem (107, aces and grasslan	nd. Commo	n, widespr	read.	LOWI	WII DOMAN
CREICH				CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
	inavica E. W. Da llaces. Rare.	vies (108)	Northern	Yellow	Sedge	
Eddrach A.G.K.)	EDDRACHILLIS illis (Sheigra & S	Sandwood,	—— 1951, M.M	IcC.W.,	Rhiconi	ch, 1963 <mark>,</mark>
Dwarf Y	na Mérat (107, 10 Zellow Sedge andy places. Occa	•	ruited Yel	low Sed	ge or	
·		DORNOCH	GOLSPIE			KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
	sa Gooden. (107, salt marshes. Occ	asional.		ledge		
ASSYNT	EDDRACHILLIS	DORNOCH DURNESS		FARR		
C. sylva Woods.	tica Huds. (107, 1 Rare.	· ·	Sedge			
Lairg (.	EDDRACHILLIS  Loch Shin)					

Rogart (Strath Fleet) Eddrachillis (Kylesku) C. capillaris L. (107, 108) Hair Sedge Wet grassy places on basic soil. Mainly on north and west coast. Frequent. KILDONAN C. rostrata Stokes (107, 108) Bottle Sedge Margins of lochans and marshes. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR C. vesicaria L. (107) Bladder Sedge Margins of lochs. Rare. Clyne (Loch Brora, 1957, W.A.T.) Kildonan (Kildonan, 1957, M.McC.W.) C. saxatilis L. (107, 108) Russet Sedge Mountain bogs, Rare. CREICH Creich (Ben More Assynt at 2700 ft, 1960, D.A.R.) Farr (Ben Klibreck, 1952, J.R.) C. pallescens L. (107, 108) Pale Sedge Wet woods. Frequent. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR C. panicea L. (107, 108) Carnation Sedge Wet grassy places. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE KILDONAN CLYNE LOTH ASSYNT EDDRACHILLIS DURNESS TONGUE FARR C. vaginata Tausch (108) Sheathed Sedge

—— EDDRACHILLIS DURNESS —— Eddrachillis (Oldshoremore, 1833, W.H.C.) Durness (Foinaven, 1957, E.A.B.)

Wet rocky places. Rare.

			og Sedge o s. Occasion		ge		
ASSYNT	EDDRAG		DURNESS	TONGUE	FARR		
	us grass	land. Cor ROGART	B) Glaucou mmon. DORNOCH DURNESS	GOLSPIE	CLYNE FARR		S KILDONAN
			08) Slende s. Occasion			***************************************	
ASSYNT	EDDRAG	CHILLIS	DURNESS	TONGUE	FARR		
		hy places	Pill Sedge . Common	, widespre	ad.	LOTH	KILDONAN
ASSYNT	EDDRAG		DURNESS		FARR	2011	
		Latourr. ( ures. Occa	108) Sprin	ig Sedge			
	illis (Sco	und Inchr vurie, Rhi			FARR		
C. acuta In bog.			Tufted Se	dge			
Farr (A	 ltnaharre	a, 1963, C	Z.R.L.)		FARR		
		lenb. (108 ms. Rare.	3) Water S	edge or St	raight-le	eaved Se	edge
			I.E.F. &		FARR 97, E.S.	М. & И	V.A.S.,
C. recta On silt. Dornoch	Very rar	e.	arine Sedg	е			

C. nigra (L.) Reichard (1 Wet grassy places. Comm			$_{ m dge}$		
CREICH LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
C. bigelowii Torr. ex Schr Damp stony places on th					
CREICH LAIRG					KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
C. paniculata L. (108) Gr Wet grass. Rare.	eater Tuss	ock Sedge	or Panio	eled Sed	ge
EDDRACHILLIS					
Eddrachillis (Sandwood, 1964, A.G.K.)	1948, M.M	cC.W., Ha	nda, 196	32, B.S	B., Eriboll,
C. diandra Schrank (107) In bog. Rare. ROGART	Lesser Tu	ssock Sedg	ge or Les	ser Fox	Sedge
Rogart (Rogart, 1950, M.	McC.W.)				
C. disticha Huds. (107, 10 In wet grass. Rare.	98) Brown	Sedge			
	DURNESS				
Creich (Invershin, 1907, ( Durness (Durness)					
C. arenaria L. (107, 108) Sandy sea-shores. Freque		e			
	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
C. chordorrhiza L. f. (108 In sphagnum bogs. Very		edge			
	other land till til transieran				
Farr (Altnaharra, 1897, I	E.S.M. &	W.A.S., M	FARR Iudale, 1	907, G.C	C.D.)
C. maritima Gunn (107, 1 On sandy sea-shores. Occ		d Sedge			
	DORNOCH DURNESS		CLYNE FARR	<del></del>	

Dornoch (Dornoch) Clyne (Brora) Durness (Koeldale) Tonque (Scullomia, Melness) Farr (Invernaver) C. echinata Murr. (107, 108) Star Sedge Moors and bogs. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE ASSYNT EDDRACHILLIS DURNESS TONGUE FARR C. remota L. (107, 108) Remote Sedge Wet shady places. Rare. DORNOCH -CLYNE KILDONAN ASSYNT . Dornoch (Cambusmore, 1960, J.A.) Clyne (Brora, 1958, M.McC.W.) Kildonan (Suisqill, 1958, M.McC.W.) Assynt (Lochinver, Stoer, 1944, A.J.W.) C. curta Gooden. (107, 108) White Sedge Bogs and marshes. Frequent. ROGART DORNOCH -CLYNE KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR C. ovalis Gooden. (107, 108) Oval Sedge Rough grassy and waste places. Common. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR C. rupestris All. (108) Rock Sedge Ledges on limestone rocks. From 50 ft on sea-cliffs to 1500 ft on hills round Inchnadamph. Rare. ASSYNT -DURNESS Assynt (Inchnadamph, 1890, E.S.M., Knockan, 1895, G.C.D., 1960, J.A.) Durness (Durness, 1865, I.B., Heilam Ferry & Smoo, 1960, D.A.R.) C. pauciflora Lightf. (107, 108) Few-flowered Sedge In bogs. Frequent. CREICH LAIRG KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE

C. pulicaris L. (107, 108) Flea Sedge In damp places. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

C. dioica L. (107, 108) Dioecious Sedge

On moors and bogs. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### GRAMINEAE

Phragmites Adans.

P. communis Trin. (107, 108) Common Reed In swamps. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Molinia Schrank

M. caerulea (L.) Moench (107, 108) Purple Moor-grass
Wet places on heaths and mountains. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

### Sieglingia Bernh.

S. decumbers (L.) Bernh. (107, 108) Heath-grass
On peaty and sandy soils. Common, widespread.
CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

## Glyceria R. Br.

G. fluitans (L.) R. Br. (107, 108) Floating Sweet-grass or Flote-grass
In shallow water, ditches, ponds. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

**G. plicata** Fr. (107, 108) Plicate Sweet-grass In ditches. Rare.

EDDRACHILLIS — KILDONAN

Kildonan (Helmsdale)

Eddrachillis (Handa)

G. declinata Bréb. (107) Small Sweet-grass or Glaucous Sweet-grass

In mud	dy pools. Rare.				· r omir	
					LOTH	
Loth (P	Cortgower)					
	ma (Hartm.) Hol of streams. Rare		,	Sweet-gra	ass	
		DORNOCH				
Dornoch	(Cambusmore)					
F	estuca L.					
	nsis Huds. (107)	Meadow F	escue			
CREICH	neadows. Rare.			CLYNE	-	KILDONAN
						KIDONAN
F. arund	linacea Schreb. (1	107, 108) Т	Call Fescue	•		
Grassy 1	places near the se	a. Rare.				
		DORNOCH				-
		• ,	,	FARR		
F. rubra	L. (107, 108) Re	d Fescue o	or Creepin	g Fescue		
Grasslar	nd, heaths, dunes,				-	
CREICH		DORNOCH		CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
F. ovina	L. (107, 108) Sh	eep's-fescu	ie			
Grassy 1	olaces. Common,	widespread	1.			
CREICH		DORNOCH		CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
F. tenuit	folia Sibth. (107,	108) Fine-	leaved She	eep's-fes	cue	
	olaces. Common.					
CREICH	LAIRG —			CLYNE	·	KILDONAN
ASSYNT			TONGUE	FARR		
	ara (L.) Sm. (107,				1	
Pastures	s on mountains. A	t sea-level DORNOCH		CLYNE		KILDONAN
	EDDRACHILLIS	DURNESS		FARR	TOTIL	REDUIAN
		_ 0 1000				
L	olium L.					

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L. perenne L. (107, 108) Perennial Rye-grass

Grassy a	and was	te places.	Common.				
CREICH	LAIRG	ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONA
ASSYNT	EDDRA	CHILLIS	DURNESS	TONGUE	FARR		
			, 108) Ital	ian Rye-g	rass		
		ides. Free	-				
CREICH ASSYNT	LAIRG EDDRA	ROGART	DORNOCH DURNESS		CLYNE FARR	LOTH	KILDONAI
V	ulpia C.	C. Gmel.					
				Barren Fes	cue or S	quirrelt	ail Fescue
CREICH ASSYNT		eaths. Occ	DORNOCH	GOLSPIE	FARR		KILDONA
Casual.		C. C. Gme	el. (107) R	at's-tail F	escue		
P	uccinell	ia Parl.					
Sea Poa		nds.) Parl ceasional.	DORNOCH DURNESS		Saltma	rsh-gras	ss or
P. distar Salt mar			Reflexed	Poa or Re	eflexed S	altmars	h-grass
Durness	(Durne	ss, D.McC	DURNESS C., 1966)		FARR		
C	atapodiu	ım Link					
C. marin Sea-shor			ıbbard (10	8) Darnel	Poa or	Sea Feri	n-grass
	Clachtol	l, 1944, A	 .J.W., 196 , M.McC.		 '.W.)		
P	oa L.						
P. annua	a L. (10'	7, 108) Ar	nual Mea	dow-grass			

	oadsides, waste p	laces. Com	mon, wide	spread.		
CREICH	LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT	EDDRACHILLIS	DURNESS	TONGUE	FARR		
	a L. (107) Alpine laces on mountain					
Creich (.	Ben More Assynt,	1826, R.G	., 1959, D	(A.R.)		
P. nemo	ralis L. (107, 108 ads. Occasional.		eadow-gras	·	T OWNT	KHDONAN
ASSYNT		DORNOCH	GOLSFIE		LOTH	KILDONAN
P. glauc Damp re	a Vahl (108) Glau ock ledges on hill	to 2000 ft	. Rare.		_	
ASSYNT		DURNESS	TONGUE			
Durness	Canisp, 1900, C.I (Meall Horn, 198 (Ben Loyal, 1959	58, D.A.R.				
D						
	nsis L. (107, 108) s, roadsides, wast			iss		
	s, roadsides, waste		ommon.	CLYNE	LOTH	KILDONAN
Pastures	s, roadsides, waste	e places. C	ommon. GOLSPIE		LOTH	KILDONAN
Pastures CREICH ASSYNT P. subca	s, roadsides, wast	e places. C DORNOCH DURNESS 108) Sprea	ommon. GOLSPIE TONGUE	CLYNE FARR		KILDONAN
Pastures CREICH ASSYNT  P. subca Damp c	s, roadsides, waste LAIRG ROGART EDDRACHILLIS erulea Sm. (107, coastal sand. Freq	e places. C DORNOCH DURNESS  108) Sprea uent. DORNOCH	ommon. GOLSPIE TONGUE ding Mead	CLYNE FARR low-gras		KILDONAN
Pastures CREICH ASSYNT P. subca	s, roadsides, waste LAIRG ROGART EDDRACHILLIS erulea Sm. (107,	e places. C DORNOCH DURNESS 108) Sprea uent.	ommon. GOLSPIE TONGUE ding Mead	CLYNE FARR low-gras	s	KILDONAN
Pastures CREICH ASSYNT  P. subca Damp c ASSYNT  P. trivia	s, roadsides, waste LAIRG ROGART EDDRACHILLIS erulea Sm. (107, coastal sand. Freq	e places. C DORNOCH DURNESS  108) Sprea uent. DORNOCH DURNESS  Rough Mea	ommon. GOLSPIE TONGUE ding Mead GOLSPIE TONGUE adow-grass	CLYNE FARR dow-gras CLYNE FARR	s	KILDONAN
Pastures CREICH ASSYNT  P. subca Damp c — ASSYNT  P. trivia Grassy j CREICH	s, roadsides, waste LAIRG ROGART EDDRACHILLIS  erulea Sm. (107, oastal sand. Freq ————————————————————————————————————	e places. C DORNOCH DURNESS  108) Sprea uent. DORNOCH DURNESS  Rough Mea land. Freq DORNOCH	ommon. GOLSPIE TONGUE  ding Mead GOLSPIE TONGUE  adow-grass uent. GOLSPIE	CLYNE FARR  CLYNE FARR  CLYNE	s	KILDONAN
Pastures CREICH ASSYNT  P. subca Damp c — ASSYNT  P. trivia Grassy j	s, roadsides, waste LAIRG ROGART EDDRACHILLIS  erulea Sm. (107, oastal sand. Freq EDDRACHILLIS  lis L. (107, 108) I places and waste	e places. C DORNOCH DURNESS  108) Sprea uent. DORNOCH DURNESS  Rough Mea land. Freq	ommon. GOLSPIE TONGUE  ding Mead GOLSPIE TONGUE  adow-grass uent. GOLSPIE	CLYNE FARR low-gras CLYNE FARR	LOTH	
Pastures CREICH ASSYNT  P. subca Damp c — ASSYNT  P. trivia Grassy j CREICH ASSYNT	s, roadsides, waste LAIRG ROGART EDDRACHILLIS  erulea Sm. (107, oastal sand. Freq ————————————————————————————————————	e places. C DORNOCH DURNESS  108) Sprea uent. DORNOCH DURNESS  Rough Mea land. Freq DORNOCH	ommon. GOLSPIE TONGUE  ding Mead GOLSPIE TONGUE  adow-grass uent. GOLSPIE	CLYNE FARR  CLYNE FARR  CLYNE	LOTH	
Pastures CREICH ASSYNT  P. subca Damp c  ASSYNT  P. trivia Grassy j CREICH ASSYNT  C. aquaé	s, roadsides, waste LAIRG ROGART EDDRACHILLIS  erulea Sm. (107, oastal sand. Freq EDDRACHILLIS  lis L. (107, 108) I places and waste LAIRG ROGART EDDRACHILLIS	e places. C DORNOCH DURNESS  108) Sprea uent. DORNOCH DURNESS  Rough Mea land. Freq DORNOCH DURNESS	ommon. GOLSPIE TONGUE  ding Mead GOLSPIE TONGUE  adow-grass uent. GOLSPIE TONGUE	CLYNE FARR CLYNE FARR CLYNE FARR	LOTH	KILDONAN .
Pastures CREICH ASSYNT  P. subca Damp c  ASSYNT  P. trivia Grassy j CREICH ASSYNT  C. aquai In shall	s, roadsides, waste LAIRG ROGART EDDRACHILLIS  erulea Sm. (107, oastal sand. Freq EDDRACHILLIS  lis L. (107, 108) I places and waste LAIRG ROGART EDDRACHILLIS  atabrosa Beauv.	e places. C DORNOCH DURNESS  108) Sprea uent. DORNOCH DURNESS  Rough Mea land. Freq DORNOCH DURNESS	ommon. GOLSPIE TONGUE ding Mead GOLSPIE TONGUE dow-grass uent. GOLSPIE TONGUE	CLYNE FARR CLYNE FARR CLYNE FARR	LOTH	KILDONAN .

Assynt (Clachtoll, 1886, A.G., 1957, B.F.) Eddrachillis (Scourie, 1938, J.W.H.-H. & H.H.-H.) Farr (Melvich)

## Dactylis L.

D. glomerata L. (107, 108) Cock's-foot Pastures, rough grassland, roadsides. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

## Cynosurus L.

EDDRACHILLIS

B. media L. (107, 108) Quaking-grass

Assynt (Lochinver, Inchnadamph)

C. cristatus L. (107, 108) Crested Dog's-tail Grasslands. Common, widespread. CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDON

DURNESS TONGUE

FARR

#### Briza L.

ASSYNT

Grasslands. Rare.	0.0		,	
	G	OLSPIE		
ASSYNT	DURNESS -			
Golspie (Dunrobin)				
Assynt (Lochinver, Inchn	(adamph)			
Durness (Durness)	- /			
·				
Melica L.				
M. uniflora Retz. (107) V	Vood Melick			
Damp woods. Rare.				
	DORNOCH G	OLSPIE		
Dornoch (Cambusmore)				
Golspie (Golspie)				
- ' - '				
M. nutans L. (107, 108)	Mountain Me	lick		
Woods. Rare.				
CREICH —	DORNOCH G	OLSPIE		
ASSYNT				
Creich (Invershin)				
Dornoch (Cambusmore)				
Golsnie (Golsnie)				

## Bromus L.

B. ramosus Huds. (107, 1	08) Hairy	Brome			
Woods. Occasional.					
ACCIVITE		GOLSPIE			
ASSYNT —— Golspie (Dunrobin)					
Assynt (Lochinver, Inchn	adammh)				
1133gitt (1200ittitle), 1 noith	www.mpm)				
B. sterilis L. (107, 108) B. Waste places. Rare.	Sarren Broi	ne			
		GOLSPIE			KILDONAN
ASSYNT					
Golspie (Dunrobin)					
$Kildonan\ (Helmsdale)$					
Assynt (Inchnadamph)					
<b>B.</b> mollis L. (107, 108) Lo Fields, dunes, roadsides a					
CREICH LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
			Brome CLYNE		KILDONAN
Lairy (Lairy)					
Dornoch (Loch Fleet) Clyne (Brora)					
Kildonan (Borrobal)					
Tongue (Melness, Scullom	ie)				
2 bright (112 bridges, 20 all or	,,,,				
B. lepidus Holmberg. (107) Fields and roadsides. Fre		nder Soft I	Brome		
CREICH LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
EDDRACHILLIS	DURNESS	TONGUE	FARR		
B. commutatus Schrad. (Barassland. Rare.	107, 108) N	Ieadow Br	rome		
CREICH		GOLSPIE			
ASSYNT					
Creich (Bonar Bridge)					
Golspie $(Golspie)$					
$Assynt\ (Knockan)$					
170					

Brachypodium Beauv.

B. sylvaticum (Huds.) Be	eauv. (107, 108) Fals	e Brome	
Woods. Frequent. CREICH LAIRG ROGART	DORNOCH GOLSPIE		
ASSYNT EDDRACHILLIS	DURNESS TONGUE	FARR	
Agropyron Gaertn			
A. caninum (L.) Beauv. Damp woods. Rare.	(107, 108) Bearded (	Couch	
	DORNOCH GOLSPIE		
ASSYNT ——	DURNESS TONGUE	FARR	
A. donianum F. B. White Limestone rocks. Very ra  ———————————————————————————————————		witch or Don's C	Couch
A. repens (L.) Beauv. (16 Cultivated fields and was CREICH LAIRG ROGART ASSYNT EDDRACHILLIS	te places. Frequent.  DORNOCH GOLSPIE	cLYNE LOTH	KILDONAN
A. junceiforme (A. & D. On sandy shores and dur	es. Frequent.	e (107, 108) Sand	
ASSYNT EDDRACHILLIS	DORNOCH GOLSPIE DURNESS TONGUE	FARR	KILDONAN
		2 22272	
Elymus L.			
E. arenarius L. (107, 108 Seaward side of dunes. O			
	DORNOCH GOLSPIE	-	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS TONGUE	FARR	
Hordeum L.			
H. murinum L. (107) Waste places. Very rare.	all Barley		KILDONAN
***************************************			
$Kildonan\ (Helmsdale)$			

Koeleria Pers.

K. cristata (L.) Pers. (107, 108) Cr	ested Hair	-grass		
Coastal pastures. Frequent.				
— — DORNOCI	H GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS DURNESS	STONGUE	FARR		
Trisetum Pers.				
T. flavescens (L.) Beauv. (107, 108	) Yellow C	at-grass		
Grassy places. Rare.	,	Ü		
	,	CLYNE		
ASSYNT		FARR		
Assynt (Lochinver, 1886, A.G.)				
Clyne (Brora, 1962, M.McC.W.)				
Farr (Bettyhill, 1973, K.D.L.)				
Avena L.				
A C . T /IOW IOON TITLE .				
A. fatua L. (107, 108) Wild-oat				
Fields. Rare.				
— ROGART —	<del></del>			
D //D / 1078 74 74 0 TE \	TONGUE			
Rogart (Rogart, 1957, M.McC.W.)				
Tongue (Coldbackie, 1901, E.S.M.)				
A stringer Schrob (107) Prietle O	ot on Plank	r Oot		
A. strigosa Schreb. (107) Bristle O Creich (Bonar Bridge, 1836, A. Ma		Coat		
Creich (Bonar Briage, 1850, A. M.	urray)			
Helictotrichon Bess.				
H. pratense (L.) Pilg. (107, 108) M	leadow Oat	-grass		
Coastal turf. Rare.		8		
	GOLSPIE			KILDONAN
EDDRACHILLIS DURNES	3			
H. pubescens (Huds.) Pilg. (107, 1	08) Downy	Oat-gra	ss or	
Hairy Oat-grass	,			
Rough grassland. Frequent.				
	H GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS DURNES	STONGUE	FARR		
Arrhenatherum Beauv.				

A. elatius (L.) Beauv. ex J. & C. Presl. (107, 108) False Oat-grass

Roadsides and waste ground. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Holcus L.

H. lanatus L. (107, 108) Yorkshire Fog
Rough grassland, waste places. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

H. mollis L. (107, 108) Creeping Soft-grass

Open woodlands. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

### Deschampsia Beauv.

- D. caespitosa (L.) Beauv. (107, 108) Tufted Hair-grass
  Marshy fields, moors and woods. Common, widespread.

  CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
  ASSYNT EDDRACHILLIS DURNESS TONGUE FARR
- D. alpina (L.) Roem. & Schult. (107, 108) Alpine Hair-grass Stony places on mountains from 2000 to 3000 ft. Rare.

D. flexuosa (L.) Trin. (107, 108) Wavy Hair-grass

Heaths and moors. To 3000 ft. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

Creich (Invershin)
Eddrachillis (Sandwood)
Tongue (Tongue)
Farr (Altnaharra, Invernaver, Melvich)

#### Aira L.

A. praecox L. (107, 108) Early Hair-grass

On dry bare sandy and rocky slopes. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

KILDONAN

A. caryophyllea L. (107, 108) Silver Hair-grass

Dry sandy soil on heaths and fields. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

A 10 TT

Ammophila Host

A. arenaria (L.) Link (107, 108) Marram Grass

Coastal dunes. Frequent.

DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

× Ammocalamagrostis P. Fourn.

×A. baltica (Schrad.) P. Fourn. (108)

On dunes. Rare.

Eddrachillis (Handa Island, 1938, J.W.H.-H. & H.H.-H.)

Calamagrostis Adans.

C. epigejos (L.) Roth (108) Wood Small-reed or Bushgrass Damp woods, ditches. Rare.

ASSYNT EDDRACHILLIS

Assynt (Stoer, Oldany)

Eddrachillis (Handa Island)

Agrostis L.

A. canina L. (107, 108) Brown Bent-grass

Wet meadows, heaths, grassland on hills. Common.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

A. tenuis Sibth. (107, 108) Common Bent-grass

On heaths, moors, waste ground. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

A. gigantea Roth (107, 10 Fields and roadsides. Ra		on Bent-gr	rass or Bl	ack Be	nt-grass
	DORNOCH				KILDONAN
			FARR		
A. stolonifera L. (107, 10 Grassland, coastal sands,				ass	
CREICH LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
Phleum L.					
P. bertolonii DC. (107, 10 Grassland. Probably over		Cat's-tail			
		GOLSPIE			KILDONAN
ASSYNT —	<del></del>		FARR		
P. pratense L. (107, 108) Fields, roadsides. Occasion					
CREICH —	DORNOCH	GOLSPIE			KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
Alopecurus L.					
A. myosuroides Huds. (10	08) Black	Twitch or	Black-gra	ass	
An old record.	,		0		
Farr (Bettyhill, 1889, F.	J.H. & J.(	C.M.			
A. pratensis L. (107, 108) Grassland. Frequent.	) Meadow	Foxtail			
CREICH LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
A. geniculatus L. (107, 10 Muddy margins of pools			nt.		
CREICH LAIRG ROGART	DORNOCH	GOLSPIE	CLYNE	LOTH	KILDONAN
ASSYNT EDDRACHILLIS	DURNESS	TONGUE	FARR		
A bulbosus Couon (108)	Tuborous	Fortail or	Rulbous	Forts	1

Jouan (108) Tuberous Foxtail or Bulbous Foxtail Marshes. Rare.

Farr (Altnaharra, 1931, T.J.F.)

Milium L.

M. effusum L. (107) Wood Millet

GOLSPII

Golspie (Dunrobin, 1897, E.S.M.)

#### Anthoxanthum L.

A. odoratum L. (107, 108) Sweet Vernal-grass

Heaths, moors, grasslands. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN

ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

#### Phalaris L.

P. arundinacea L. (107, 108) Reed Canary-grass
Marshes, ditches, margins of ponds. Frequent.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

P. canariensis L. (108) Canary-grass Casual. Durness (Durness)

#### Nardus L.

N. stricta L. (107, 108) Mat-grass
Heaths, moors, hill pastures. Common, widespread.

CREICH LAIRG ROGART DORNOCH GOLSPIE CLYNE LOTH KILDONAN
ASSYNT EDDRACHILLIS DURNESS TONGUE FARR

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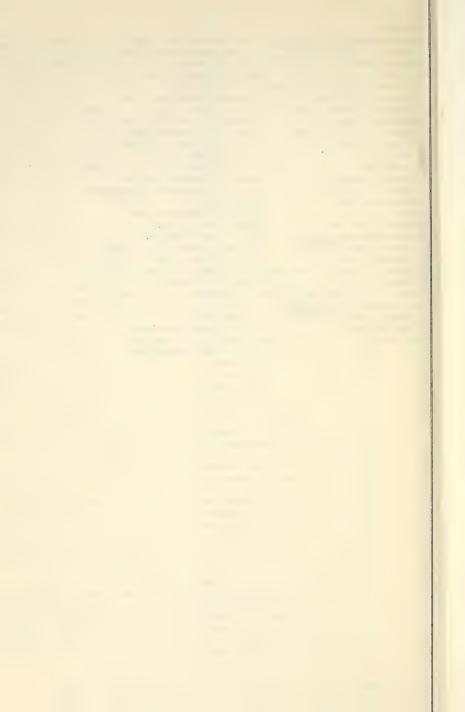
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